

VA

**JP-16X ELECTRONIC TYPEWRITER
SERVICE MANUAL & PARTS REFERENCE LIST**

MECHANICAL PORTION

brother®

**MODEL; CE-58
; CE-68**

CE-58/68 VA

PARTS REFERENCE LIST

Attention !

Covering VA models, all supplement parts are described in this Parts List.

As for supplement parts before the practice of VA, refer to the catalog Nos. B4030275/B4030276.

The practice time of VA production for each model are shown below.

Model	The practice time of VA production (SER. No.)
CE-58	
COMPACTRONIC 58	
CE-68	
EXELECTRON 68	

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- PREFACE -

This Parts Reference List (MECHANICAL PORTION) pertains to the "Electronic Typewriter JP-16X" and the data of each models in reference to the Supply Parts which have been accumulated since the date (June 1985).

In order to accomplish the After-Service most efficiently, it is most essential to sufficiently grasp the general explanation of Parts Reference List (MECHANICAL PORTION & ELECTRIC PORTION) usage and the ordering Procedures described on each items.

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GENERAL EXPLANATION

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1. VIEWPOINT OF PARTS REFERENCE LIST & COMPOSING UNITS

This Parts Reference List describes by coordinating the Electronic Typewriter JP-16X series.

The composing units of the disassembly drawing have been divided in accordance to their functions in group order as; Printing Element, Cover & Circuit Board and etc.

Upon usage, compare the Model Number indicated at the top of the Index as per the models within the product Model Numbers and Parts Reference List and clarify the Main-Reference Number of each model unit then, procure the required part from the disassembly drawing within that Main-Reference Number.

2. REFERENCE NUMBERS

The reference numbers consist of the Main-Reference Number and the Sub-Reference Number.

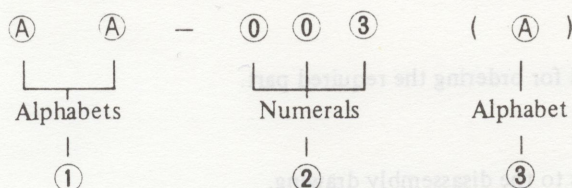
The functions of each are as follows.

a) Main-Reference Number

This serves the objective in joining the model functional disassembly drawing.

(Indication)

The Main-Reference Number is indicated with five or six figures per functional disassembly drawing.



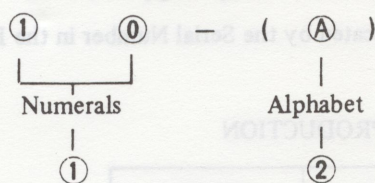
Definition of indicating items

No.	Definition
①	Series & model classification
②	Functional disassembly drawing classification
③	Disassembly drawing detail classification

b) Sub-Reference Number

This serves the objective in joining the functional disassembly drawing and Parts Code and Parts Name.

The Sub-Reference Number is indicated with one figure to three figures.



Definition of indicating items

No.	Definition
①	Disassembly drawing consecutive numbers
②	Design change occurrence classification

3. INDICATION DETAILS OF PARTS CODE & PARTS NAME

①
↓

Items & Sequence of Explanation

MAIN-REF. NO.		Functional group name	FUNCTIONAL GROUP NAME ← ②						
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK	
							FROM	UP TO	

① Main-Reference Number

This number joins the model and functional disassembly drawing.

② Functional Classification name

Functional Classification name of Brother

③ Sub-Reference Number

This number joins the functional disassembly drawing and Parts Code and Parts Name.

④ Parts Code

This number is utilized for ordering the required part.

⑤ Parts Name

The Parts Name relates to the disassembly drawing.

⑥ Quantity (Q'ty)

This indicates the utilizing quantity in relation to the Parts Name of 5.

Even with the same Parts Code within the same page, it is separately mentioned every time when the Parts Name of 5 differs.

⑦ C/P

When it is mentioned in this column, it indicates that this part has been design changed.

It indicates the replacement of the mentioning figure difference. (For detail, please refer to the replacement item (design change part).)

⑧ New Code

This indicates the New Code of the replacement item (design change part).

⑨ Production

This indicates the manufacturing period when the part has been design chaged.

(This material helps in judging whether the acquiring part is before or after the design change.)

Caution: The production is indicated by the Serial Number in the Rating Plate.

PRODUCTION

FROM	UP TO
A4000010	C5011000

4. PARTS REPLACEMENT (DESIGN CHANGED PARTS)

When a part is design changed, there is a change with interchangeability and a change without the interchangeability.

Among these, the change which is capable to utilize the new part even on the old product is called "Parts Replacement"

In order to accomplish the After-Service most efficiently, it is most essential to adapt this replacement effectively.

a) Definition of C/P column code

Code	Term	Definition
A	Unit replacement	Replacement capable only with unit part
B	Assembly replacement	Replacement capable with part SET
C	Special replacement	It relates to special replacement when the assembled quantity is numerous with assembly replacement. In this case, attach sheet will be enclosed.
D	Discontinued parts	

b) Viewpoint of replacement

[Unit replacement]

PARTS CODE & PARTS NAME

MAIN-REF. NO.	PA-061	Functional group name	COVER					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
	507662001	Spring	1	A	535099001(1)	A4000010	C5011000	

The parts Code 507662001 has been revised to New Code 535099001 and the C/P is (A), it is a unit replacement. The old part production if from Serial Number A4000010 up to C5011000.

Caution: The figure within the () at the side of the New Code is the quantity of New Part requirement per piece of Old Part.

[Assembly replacement]

PARTS CODE & PARTS NAME

MAIN-REF. NO.	KA-060(A)	Functional group name	MAIN COVER					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
10	518096001	Opener Spring	1	B	518206001(1) 518207001(1) 518155001(1) 518174001(1)	A7000010	D8011000	

The Parts Code 518096001 has been revised to New Code 518206001 and as the C/P is (B), it is an assembly replacement. The old part production is from Serial Number A7000010 up to D8011000.

Caution: The figure within the () at the side of the New Code is the quantity of New Part requirement per piece of Old Part.

5. ORDERING PROCEDURES

The ordering person is capable to perform the specified various procedures of the Parts Code, Parts Name and utilizing locations when ordering the required parts but, due to the knowledge of the ordering person and order receiving person, it may be difficult to convey the contents correctly.

To compensate for the misunderstanding of these persons and to request the correct parts, it is very important to sufficiently grasp the following precautions of the ordering procedures.

a) Ordering procedure of Common Parts

The following describes the definite communication and indicating items.

Model Number

Parts Code

Parts Name

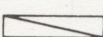
Reference Numbers
(Main & sub)

Quantity

[Indication example]

Model No.	Parts Code	Parts Name	Reference Nos. (Main & sub)	Quantity
CE-68	U05727001	Ribbon Feed Gear Base Assembly	SF-043-(40~53)	10 pcs.

b) Ordering procedure of Color Part

The code column  Part differs with the color.

The Parts Code and Parts Name are separately indicated in the lower space as Special Parts.

Please refer to this and order by matching the required color.

The following describes the definite communication and indicating items.

Model Number
(Parts Code)

Parts Name

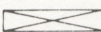
Color

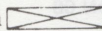
Reference Numbers
(Main & sub)

Quantity

[Indication example]

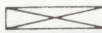
Model No.	Parts Code	Parts Name	Color	Reference Nos. (Main & sub)	Quantity
CE-68	U07466002	Upper Cover Unit	Black (010)	SI-061-(3~8)A	5 pcs.

- c)  ordering procedure of parts for different territories.

The code column  part indicates the part utilized by different territories.

The Parts Code and Parts Name are separately indicated in the lower space as Special Parts.

Please order the required parts by referring to the disassembly drawing and Special Parts.

- (*) The code column  part is CIRCUIT BOARD ASSEMBLY, PRINTING ELEMENT, COVER, NAME PLATE, INSTRUCTION BOOK, RATING PLATE, CARTON.

- d) Ordering procedure of Electrical Parts

The Electrical Parts differ in accordance to the utilizing electrical standards of the territory.

The disassembly drawings are drawn separately to match the electrical standards of each territory.

Upon ordering, please refer to the disassembly drawing upper space for separate standards of each territory.

The following described the definite communication and indicating items.

Model Number

Parts Code

Parts Name

Electrical Standards

Reference Numbers
(Main & sub)

Quantity

[Indication example]

Model No.	Parts Code	Parts Name	Electrical Standards	Reference Nos. (Main & sub)	Quantity
CE-68	U05744001	Cord Switch Unit	115V	SI-050-1(B)	2 pcs.

GROUP NAME		brother CE-58 COMPACTRONIC 58		brother CE-68 EXECUTRON 68	
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5.	PLATEN MECHANISM	SF-031	22~25	←	
6.	CHASSIS	SF-033	26~27	←	
7.	CHASSIS ATTACHMENT	SA-034	28~29	←	
8.	HEAD MECHANISM	SF-043	30~33	←	
9.	ELECTRICAL COMPONENT	SI-050	34~35	←	
10.	POWER SUPPLY CORD	SA-051	36~37	←	
11.	MOTOR	SF-054	38~39	←	
12.	HAMMER MECHANISM	SA-055	40~41	←	
13.	MAIN COVER & NAME PLATE	SH-061	42~45	SI-061	46~49
14.	CASE	SA-062	50~51		
15.	DETECTOR	SF-100	52~53	←	
16.	RELAY CIRCUIT BOARD	SE-101	54~55	←	
17.	LOGIC CONTROL WITH				
18.	KEYBOARD CIRCUIT BOARD	SH-102	56~59	SI-102	60~63
	FILTER CIRCUIT BOARD	SA-103	64~65	←	
19.	POWER SUPPLY CIRCUIT BOARD	SF-104	66~67	←	
20.	INTERFACE CONNECTOR	SF-105	68~69	←	
21.	LCD CIRCUIT BOARD	SF-108	70~71	←	
22.	ACCESSORY			SB-910	72~73
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24.	PACKING MATERIALS	SH-930	78~79	SI-930	80~81
25.	PRINT HEAD ASSEMBLY	SF-940	82~83	←	
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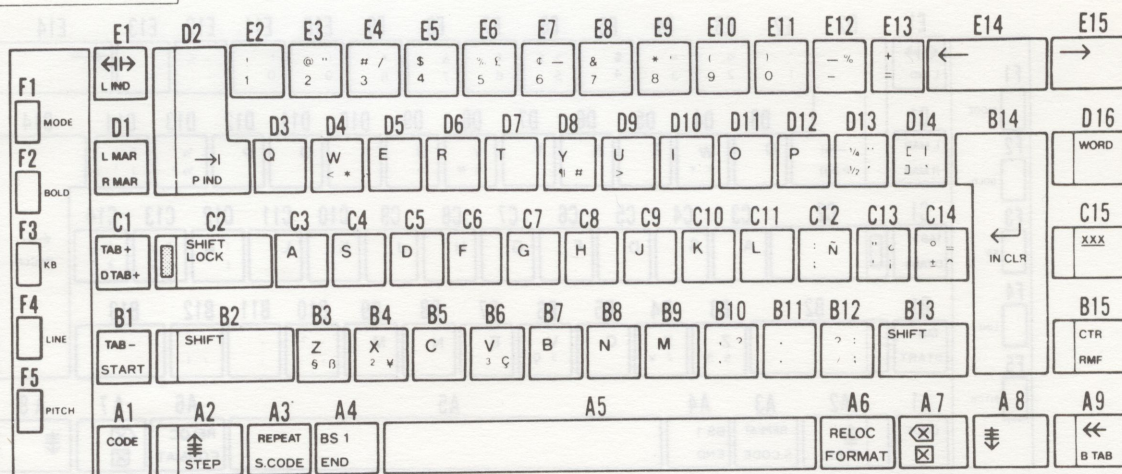
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KEY TOP (A. ENGLISH) U.S.A. only

Model: CE-58, CE-68

 MAIN-
REF. NO. ZZ-16XA-4


SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code key	1	C12	583321001		Key (: ; Ñ)	1
A2	U06719001		Super Script, Step Key	1	C13	583322001		Key (" ' ì i)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583323001		Key (° ± = ^)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583313001		Key (W < *)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
					D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
B2	U05981001		Power Shift Key (L)	1	D8	583314001		Key (Y ¶ #)	1
B3	583328001		Key (Z § β)	1	D9	583315001		Key (U >)	1
B4	583329001		Key (X ² ¼)	1	D10	583264001		Key (I)	1
B5	583290001		Key (C)	1	D11	583265001		Key (O)	1
B6	583330001		Key (V ³ ç)	1	D12	583266001		Key (P)	1
37	583292001		Key (B)	1	D13	583316001		Key (¼ ½ ")	1
B8	583293001		Key (N)	1	D14	583317001		Key ([] ')	1
B9	583294001		Key (M)	1	D16	U06723001		WORD Key	1
B10	583331001		Key (, , ?)	1	E1	583305001		Margin Release, Line Indent Key	1
B11	583332001		Key (. .)	1	E2	U50429001		Key (! 1)	1
B12	583333001		Key (? / : ;)	1	E3	583306001		Key (@ 2 ")	1
B13	U05982001		Power Shift Key (R)	1	E4	583307001		Key (# 3 /)	1
B14	U50479001		Return Indent Clear Key	1	E5	583241001		Key (\$ 4)	1
B15	583318001		Centering, Right Margin Flash Key	1	E6	583308001		Key (% 5 £)	1
					E7	583309001		Key (¢ 6 _)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583244001		Key (& 7)	1
					E9	583310001		Key (* 8 ')	1
C2	U05978001		Shift Lock Key	1	E10	583246001		Key ((9)	1
C3	583273001		Key (A)	1	E11	583247001		Key () 0)	1
C4	583274001		Key (S)	1	E12	583311001		Key (_ - %)	1
C5	583275001		Key (D)	1	E13	583249001		Key (+ =)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1					
C9	583279001		Key (J)	1	F1~F5		U06078001	Function Key	5
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

536-681-ZZ-16XA-4

KEY TOP (A. ENGLISH) Others

Model: CE-68

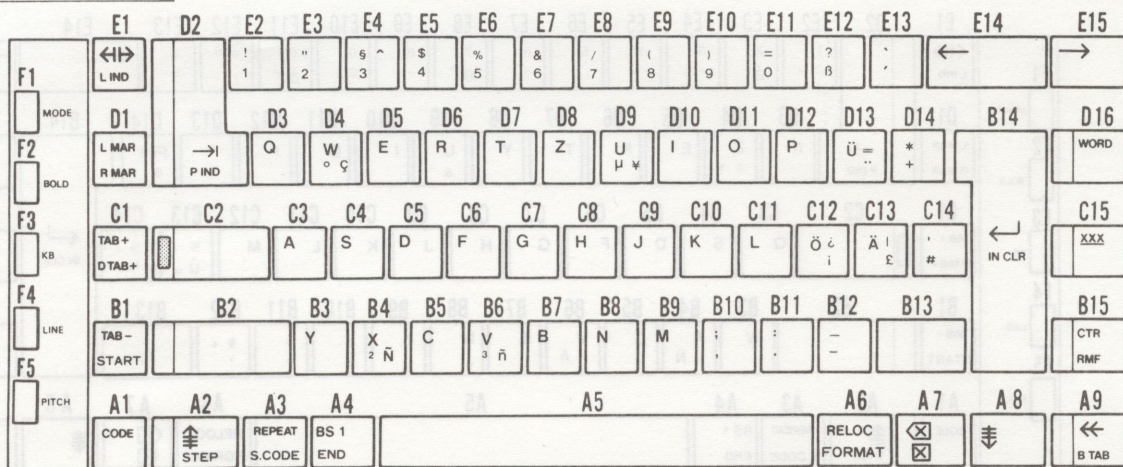
MAIN-REF. NO.		ZZ-16XB-4								
F1 MODE F2 BOLD F3 KB F4 LINE F5 PITCH E1 D2 E2 E3 E4 E5 E6 E7 E8 E9 E10 E11 E12 E13 E14 E15 D1 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 B14 D16 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B15 A1 A2 A3 A4 A5 A6 A7 A8 A9										
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY	
	COLOR FOR KEY									
	Black					Black	Green			
A1	U05621001		Code key	1	C12	583321001		Key (: ; Ñ)	1	
A2	U06719001		Super Script, Step Key	1	C13	583322001		Key (" ' ÿ ÿ)	1	
A3	U06720001		Repeat, Stop Code Key	1	C14	583323001		Key (° ± = ~)	1	
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1	
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1	
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1	
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1	
A8	U05612001		Sub Script Key	1	D4	583313001		Key (W < *)	1	
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1	
B1	U06718001		Tab Clear, Start Key	1	D6	583260001		Key (R)	1	
B2	U50480001		Power Shift Key (L)	1	D7	583261001		Key (T)	1	
B3	583328001		Key (Z § β)	1	D8	583314001		Key (Y ¶ #)	1	
B4	583329001		Key (X ² ¥)	1	D9	583315001		Key (U >)	1	
B5	583290001		Key (C)	1	D10	583264001		Key (I)	1	
B6	583330001		Key (V ³ ç)	1	D11	583265001		Key (O)	1	
B7	583292001		Key (B)	1	D12	583266001		Key (P)	1	
B8	583293001		Key (N)	1	D13	583316001		Key (¼ ½ ~)	1	
B9	583294001		Key (M)	1	D14	583317001		Key ([] `)	1	
B10	583331001		Key (, , ?)	1	D16	U06723001		WORD Key	1	
B11	583332001		Key (. .)	1	E1	583305001		Margin Release, Line Indent Key	1	
B12	583333001		Key (? / : ;)	1	E2	U50429001		Key (! 1)	1	
B13	U50481001		Power Shift Key (R)	1	E3	583306001		Key (@ 2 ")	1	
B14	U50479001		Return, Indent Clear Key	1	E4	583307001		Key (# 3 /)	1	
B15	583318001		Centering, Right Margin Flash Key	1	E5	583241001		Key (\$ 4)	1	
C1	583320001		Tab Set, Decimal Tab Set Key	1	E6	583308001		Key (% 5 £)	1	
C2	U05819001		Shift Lock Key	1	E7	583309001		Key (¢ 6 _)	1	
C3	583273001		Key (A)	1	E8	583244001		Key (& 7)	1	
C4	583274001		Key (S)	1	E9	583310001		Key (* 8 ')	1	
C5	583275001		Key (D)	1	E10	583246001		Key ((9)	1	
C6	583276001		Key (F)	1	E11	583247001		Key () 0)	1	
C7	583277001		Key (G)	1	E12	583311001		Key (_ = %)	1	
C8	583278001		Key (H)	1	E13	583249001		Key (+ =)	1	
C9	583279001		Key (J)	1	E14	U50474001		Back Space Key	1	
C10	583280001		Key (K)	1	E15	U50475001		Forward Space Key	1	
C11	583281001		Key (L)	1	F1~F5		U06078001	Function Key	5	

KEY TOP (GERMAN)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XC-4



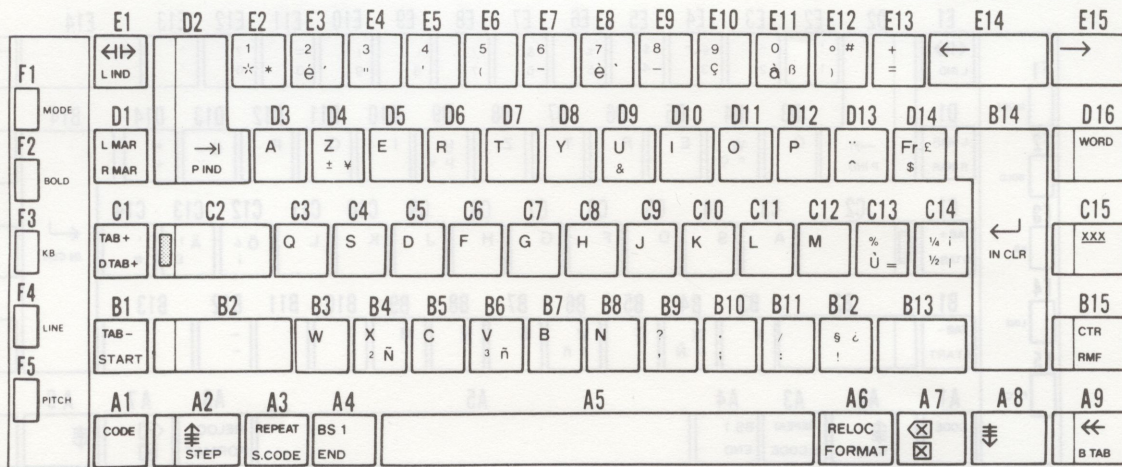
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583355001		Key (Ö ÿ)	1
A2	U06719001		Super Script, Step Key	1	C13	583356001		Key (Ä £)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583357001		Key (' #)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	U06724001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583350001		Key (W ° ç)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583351001		Key (Z)	1
B2	U50480001		Power Shift Key (L)	1	D9	583352001		Key (U µ ¥)	1
B3	583358001		Key (Y)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583353001		Key (Ü = ")	1
B7	583292001		Key (B)	1	D14	583354001		Key (* +)	1
B8	583293001		Key (N)	1	D16	U06723001		Word Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583361001		Key (; ,)	1					
B11	583362001		Key (: .)	1	E2	U50429001		Key (! 1)	1
B12	583363001		Key (_ -)	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	583342001		Key (§ 3 ^)	1
B14	U50479001		Return, Indent Clear Key	1	E5	583241001		Key (\$ 4)	1
B15	583318001		Centering, Right Margin Flash Key	1	E6	583242001		Key (% 5)	1
					E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583344001		Key (/ 7)	1
					E9	583345001		Key ((8)	1
C2	U05819001		Shift Lock Key	1	E10	583346001		Key () 9)	1
C3	583273001		Key (A)	1	E11	583347001		Key (= 0)	1
C4	583274001		Key (S)	1	E12	583348001		Key (? 6)	1
C5	583275001		Key (D)	1	E13	583349001		Key (` ')	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

KEY TOP (FRENCH)

Model: CE-68

MAIN-
REF. NO.

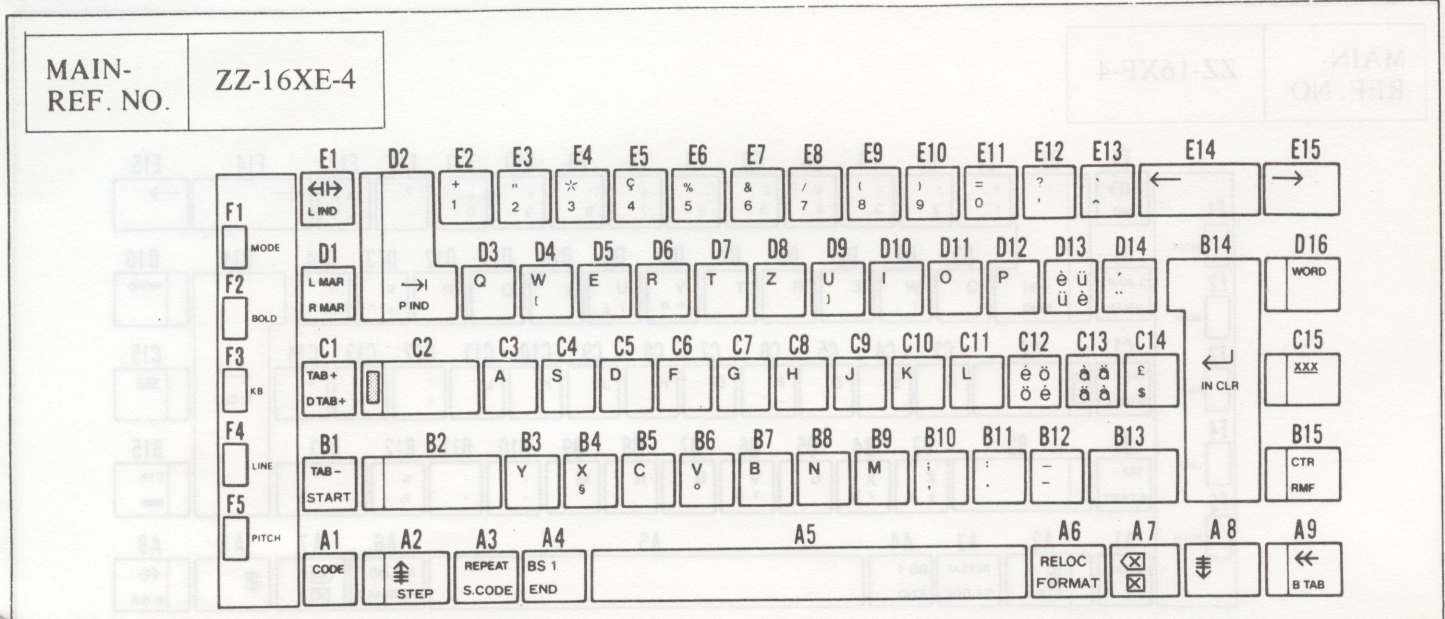
ZZ-16XD-4



SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583535001		Key (M)	1
A2	U06719001		Super Script, Step Key	1	C13	583536001		Key (% ù =)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583537001		Key (¼ ½ i l)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	583528001		Key (A)	1
A8	U05612001		Sub Script Key	1	D4	583529001		Key (Z ± ¥)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D7	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583531001		Key (U &)	1
B3	583538001		Key (W)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583532001		Key (· · ^)	1
B7	583292001		Key (B)	1	D14	583533001		Key (Fr \$ £)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583539001		Key (? ,)	1	E1	583305001		Margin Release, Line	1
B10	583540001		Key (. ;)	1				Indent Key	
B11	583541001		Key (/ :)	1	E2	583517001		Key (1 * *)	1
B12	583542001		Key (\$! ¿)	1	E3	583518001		Key (2 é ')	1
B13	U50481001		Power Shift Key (R)	1	E4	583519001		Key (3 ")	1
B14	U50479001		Return, Indent Clear Key	1	E5	583520001		Key (4 ')	1
B15	583318001		Centering, Right Margin	1	E6	583521001		Key (5 ()	1
			Flash Key		E7	583522001		Key (6 -)	1
C1	583320001		Tab Set, Decimal Tab Set	1	E8	583523001		Key (7 è *)	1
			Key		E9	583524001		Key (8 -)	1
C2	U05819001		Shift Lock Key	1	E10	583525001		Key (9 ç)	1
C3	583534001		Key (Q)	1	E11	583526001		Key (0 à ß)	1
C4	583274001		Key (S)	1	E12	583527001		Key (°) #)	1
C5	583275001		Key (D)	1	E13	583249001		Key (+ =)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

KEY TOP (SWISS GERMAN, FRENCH)

Model: CE-68



SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583673001		Key (é ö ö é)	1
A2	U06719001		Super Script, Step Key	1	C13	583674001		Key (à ä ä à)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583675001		Key (£ \$)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583669001		Key (W)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583351001		Key (Z)	1
B2	U50480001		Power Shift Key (L)	1	D9	583670001		Key (U)	1
B3	583358001		Key (Y)	1	D10	583264001		Key (I)	1
B4	583676001		Key (X §)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583297001		Key (V °)	1	D13	583671001		Key (ë ü ü ë)	1
B7	583292001		Key (B)	1	D14	583672001		Key (' ')	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583361001		Key (; ,)	1	E2	583664001		Key (+ 1)	1
B11	583362001		Key (: .)	1	E3	583341001		Key (" 2)	1
B12	583363001		Key (_ -)	1	E4	583665001		Key (* 3)	1
B13	U50481001		Power Shift Key (R)	1	E5	583666001		Key (ç 4)	1
B14	U50479001		Return, Indent Clear Key	1	E6	583242001		Key (% 5)	1
B15	583318001		Centering, Right Margin	1	E7	583343001		Key (& 6)	1
			Flash Key		E8	583344001		Key (/ 7)	1
C1	583320001		Tab Set, Decimal Tab Set	1	E9	583345001		Key ((8)	1
			Key		E10	583346001		Key () 9)	1
C2	U05819001		Shift Lock Key	1	E11	583347001		Key (= 0)	1
C3	583273001		Key (A)	1	E12	583667001		Key (? ')	1
C4	583274001		Key (S)	1	E13	583668001		Key (^ ^)	1
C5	583275001		Key (D)	1	E14	U50474001		Back Space Key	1
C6	583276001		Key (F)	1	E15	U50475001		Forward Space Key	1
C7	583277001		Key (G)	1	F1~F5		U06078001	Function Key	5
C8	583278001		Key (H)	1					
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

536-681-ZZ-16XE-4

536-681-ZZ-16XF-4

KEY TOP (ITALIAN)

Model: CE-68

MAIN-REF. NO.		ZZ-16XH-4	
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F1		E1	D2	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15
MODE		←→		1	2	3	4	5	6	7	8	9	0	° #	+	←	→
F2		D1															
BOLD		L MAR	→I	Q	Z	E	R	T	Y	U	I	O	P	=	\$		
F3		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14		
KB		TAB+		A	S	D	F	G	H	J	K	L	M	%	9	←	
F4		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13			
LINE		TAB-		W	X	C	V	B	N	?	.	/	!				
F5		START															
PITCH		A1	A2	A3	A4	A5						A6	A7	A8	A9		
		CODE	STEP	REPEAT	BS 1							RELOC	⊗	⊕	←		
				S CODE	END							FORMAT			B TAB		

SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583535001		Key (M)	1
A2	U06719001		Super Script, Step Key	1	C13	583536001		Key (% ù =)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583581001		Key (§ ★ ¥ *)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583577001		Key (Z [;)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
					D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583578001		Key (U 1 ì)	1
B3	583538001		Key (W)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583579001		Key (= ì ")	1
B7	583292001		Key (B)	1	D14	583580001		Key (& \$)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583539001		Key (? ,)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583361001		Key (. ;)	1	E2	583573001		Key (1 £)	1
B11	583541001		Key (/ :)	1	E3	583518001		Key (2 é ')	1
B12	583582001		Key (! ò ì)	1	E4	583519001		Key (3 ")	1
B13	U50481001		Power Shift Key (R)	1	E5	583520001		Key (4 ')	1
B14	U50479001		Return, Indent Clear Key	1	E6	583521001		Key (5 ()	1
B15	583318001		Centering, Right Margin Flash Key	1	E7	583574001		Key (6 -)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583523001		Key (7 è `)	1
C2	U05819001		Shift Lock Key	1	E9	583575001		Key (8 ^)	1
C3	583273001		Key (A)	1	E10	583525001		Key (9 ç)	1
C4	583274001		Key (S)	1	E11	583526001		Key (ò à ß)	1
C5	583275001		Key (D)	1	E12	583527001		Key (°) #)	1
C6	583276001		Key (F)	1	E13	583576001		Key (+ -)	1
C7	583277001		Key (G)	1	E14	U50474001		Back Space Key	1
C8	583278001		Key (H)	1	E15	U50475001		Forward Space Key	1
C9	583279001		Key (J)	1	F1~F5		U06078001	Function Key	5
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

Diagram of the keyboard layout for the ZZ-16XJ-4 terminal. The keyboard is a full-sized layout with function keys on the left and a numeric keypad on the right. The main alphanumeric keys are arranged in a standard QWERTY-like pattern. The function keys are labeled F1 through F5, and the numeric keypad keys are labeled A1 through A9. The keyboard is shown in a perspective view, with the keys slightly raised. The background is a light gray color.

SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583772001		Key (` ` ` `)	1
A2	U06719001		Super Script, Step Key	1	C13	583773001		Key (= ! £ \$)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583774001		Key (½ § " %)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	583758001		Key (Q Q &)	1
A8	U05612001		Sub Script Key	1	D4	583759001		Key (W W &)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
B1	U06718001		Tab Clear, Start Key	1	D6	583760001		Key (R P)	1
B2	U50480001		Power Shift Key (L)	1	D7	583261001		Key (T)	1
B3	583775001		Key (Z ²)	1	D8	583761001		Key (Y <)	1
B4	583776001		Key (X ³)	1	D9	583762001		Key (U > Θ)	1
B5	583777001		Key (C Ψ)	1	D10	583264001		Key (I)	1
B6	583778001		Key (V Ω)	1	D11	583265001		Key (O)	1
B7	583292001		Key (B)	1	D12	583763001		Key (P Π)	1
B8	583293001		Key (N)	1	D13	583764001		Key (& 5 [])	1
B9	583294001		Key (M)	1	D14	583765001		Key (° * ())	1
B10	583779001		Key (: ,)	1	D16	U06723001		WORD Key	1
B11	583780001		Key (; .)	1	E1	583305001		Margin Release, Line Indent Key	1
B12	583781001		Key (@ # + =)	1	E2	583747001		Key (+ 1 C)	1
B13	U50481001		Power Shift Key (R)	1	E3	583748001		Key (" 2 S)	1
B14	U50479001		Return, Indent Clear Key	1	E4	583749001		Key (% 3 D)	1
B15	583318001		Centering, Right Margin Flash Key	1	E5	583750001		Key (\$ 4 R)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E6	583751001		Key (£ 5 G)	1
C2	U50478001		Shift Lock Key	1	E7	583752001		Key (? 6 U)	1
C3	583273001		Key (A)	1	E8	583753001		Key (/ 7 J)	1
C4	583766001		Key (S Σ)	1	E9	583754001		Key (' 8 F)	1
C5	583767001		Key (D Δ)	1	E10	583755001		Key ((9 L)	1
C6	583768001		Key (F Φ)	1	E11	583756001		Key () 0 V)	1
C7	583769001		Key (G Γ)	1	E12	583757001		Key (~ ^ / █)	1
C8	583278001		Key (H)	1	E13	583565001		Key (- -)	1
C9	583770001		Key (J Ξ)	1	E14	U50474001		Back Space Key	1
C10	583280001		Key (K)	1	E15	U50475001		Forward Space Key	1
C11	583771001		Key (L Λ)	1	F1~F5		U06078001	Function Key	5

KEY TOP (SPANISH FOR South Central AMERICA)

536-681-ZZ-16XK-4

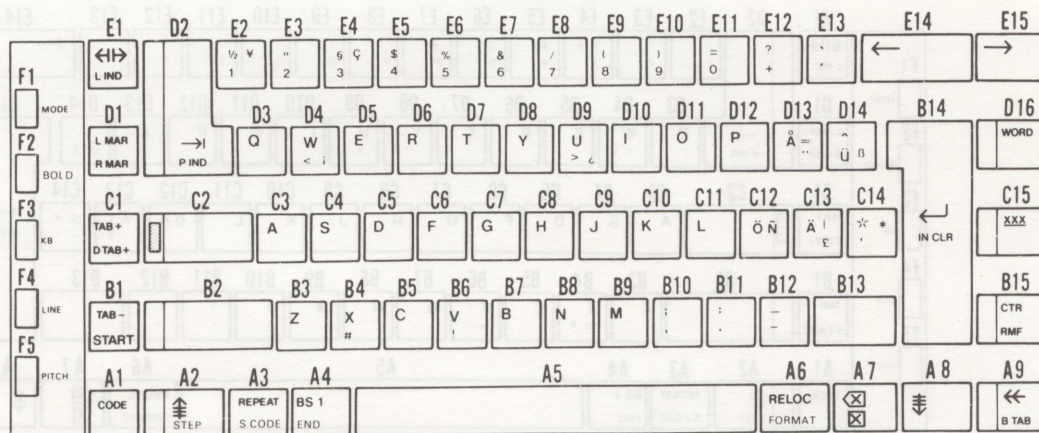
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SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY										
	COLOR FOR KEY					COLOR FOR KEY													
	Black					Black	Green												
A1	U05621001		Code Key	1	C12	583700001		Key (Ñ)	1										
A2	U06719001		Super Script, Step Key	1	C13	583569001		Key (: ;)	1										
A3	U06720001		Repeat, Stop Code Key	1	C14	583746001		Key (' ;)	1										
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1										
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1										
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1										
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1										
A8	U05612001		Sub Script Key	1	D4	583350001		Key (W ° ç)	1										
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1										
B1	U06718001		Tab Key	1	D6	583260001		Key (R)	1										
B2	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1										
B3	U50480001		Power Shift Key (L)	1	D8	583743001		Key (Y [')	1										
B4	583616001		Key (Z ± ¼)	1	D9	583744001		Key (U] `)	1										
B5	583703001		Key (X ² £)	1	D10	583264001		Key (I)	1										
B6	583290001		Key (C)	1	D11	583265001		Key (O)	1										
B7	583704001		Key (V ³ &)	1	D12	583266001		Key (P)	1										
B8	583292001		Key (B)	1	D13	583698001		Key (. . ')	1										
B9	583293001		Key (N)	1	D14	583745001		Key (º ª =)	1										
B10	583294001		Key (M)	1	D16	U06723001		WORD Key	1										
B11	583571001		Key (, ,)	1	E1	583305001		Margin Release, Line Indent Key	1										
B12	583332001		Key (. .)	1	E2	U50429001		Key (! 1)	1										
B13	583572001		Key (? /)	1	E3	583341001		Key (" 2)	1										
B14	U50481001		Power Shift Key (R)	1	E4	583562001		Key (# 3)	1										
B15	U50479001		Return, Indent Clear Key	1	E5	583241001		Key (\$ 4)	1										
C1	583320001		Centering, Right Margin Flash Key	1	E6	583242001		Key (% 5)	1										
C2	U05819001		Tab Set, Decimal Tab Set Key	1	E7	583599001		Key (* 6 *)	1										
C3	583273001		Shift Lock Key	1	E8	583244001		Key (& 7)	1										
C4	583274001		Key (A)	1	E9	583586001		Key (' 8)	1										
C5	583275001		Key (S)	1	E10	583246001		Key ((9)	1										
C6	583276001		Key (D)	1	E11	583247001		Key () 0)	1										
C7	583277001		Key (F)	1	E12	583249001		Key (+ =)	1										
C8	583278001		Key (G)	1	E13	583565001		Key (- -)	1										
C9	583279001		Key (H)	1	E14	U50474001		Back Space Key	1										
C10	583280001		Key (J)	1	E15	U50475001		Forward Space Key	1										
C11	583281001		Key (K)	1	F1~F5		U06078001	Function Key	5										
C11	583281001		Key (L)	1															

KEY TOP (SWEDISH)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XL-4

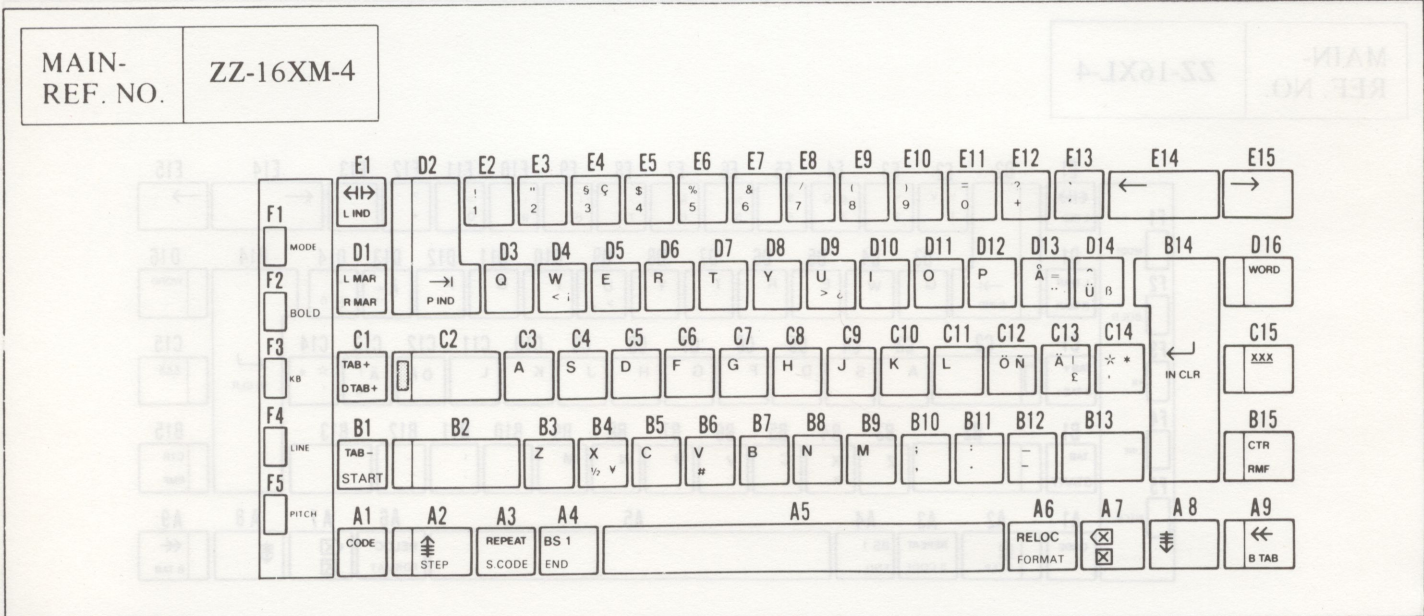


SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583738001		Key (ö Ñ)	1
A2	U06719001		Super Script, Step Key	1	C13	583356001		Key (Ä £)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583740001		Key (* ' *)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < i)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
					D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583568001		Key (U > ï)	1
B3	583595001		Key (Z)	1	D10	583264001		Key (I)	1
B4	583741001		Key (X #)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583686001		Key (V !)	1	D13	583736001		Key (A = ")	1
B7	583292001		Key (B)	1	D14	583737001		Key (^ ü ß)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583361001		Key (; ,)	1					
B11	583362001		Key (: .)	1	E2	583687001		Key (½ 1 ¼)	1
B12	583363001		Key (_ -)	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	583735001		Key (§ 3 ç)	1
B14	U50479001		Return, Indent Clear Key	1	E5	583241001		Key (\$ 4)	1
B15	583318001		Centering, Right Margin Flash Key	1	E6	583242001		Key (% 5)	1
					E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583344001		Key (/ 7)	1
					E9	583345001		Key ((8)	1
C2	U05819001		Shift Lock Key	1	E10	583346001		Key () 9)	1
C3	583273001		Key (A)	1	E11	583347001		Key (= 0)	1
C4	583274001		Key (S)	1	E12	583679001		Key (? +)	1
C5	583275001		Key (D)	1	E13	583349001		Key (^ .)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1-F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

536-681-ZZ-16XL-4

KEY TOP (FINNISH)

Model: CE-68



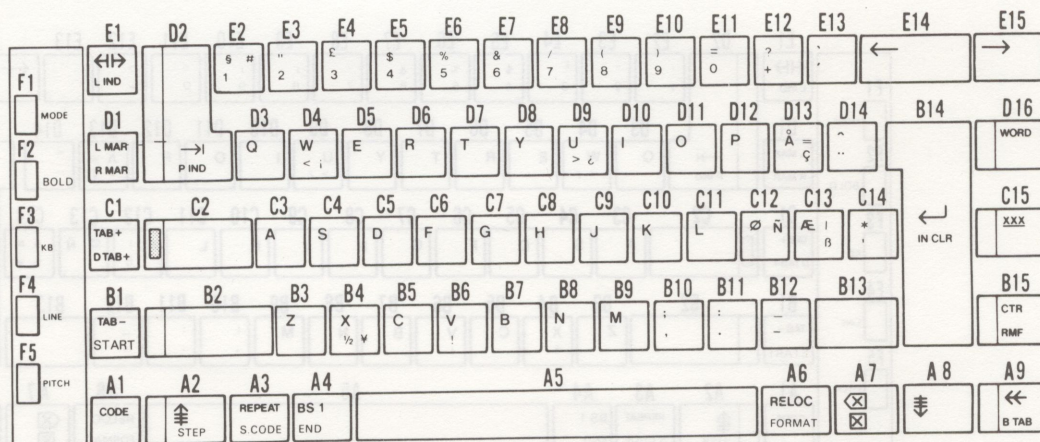
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583738001		Key (Ö Ñ)	1
A2	U06719001		Super Script, Step Key	1	C13	583356001		Key (Ä £)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583740001		Key (☆ ' *)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < ;)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
B1	U06718001		Tab Clear, Start Key	1	D6	583260001		Key (R)	1
					D7	583261001		Key (T)	1
B2	U50480001		Power Shift Key (L)	1	D8	583530001		Key (Y)	1
B3	583595001		Key (Z)	1	D9	583568001		Key (U > ¿)	1
B4	583685001		Key (X ½ ¥)	1	D10	583264001		Key (I)	1
B5	583290001		Key (C)	1	D11	583265001		Key (O)	1
B6	583742001		Key (V #)	1	D12	583266001		Key (P)	1
B7	583292001		Key (B)	1	D13	583736001		Key (Å = °)	1
B8	583293001		Key (N)	1	D14	583737001		Key (~ ü ß)	1
B9	583294001		Key (M)	1	D16	U06723001		WORD Key	1
B10	583361001		Key (; ,)	1	E1	583305001		Margin Release, Line Indent Key	1
B11	583362001		Key (: .)	1	E2	U50429001		Key (! 1)	1
B12	583363001		Key (_ -)	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	583735001		Key (§ 3 ç)	1
B14	U50479001		Return, Indent Clear Key	1	E5	583241001		Key (\$ 4)	1
B15	583318001		Centering, Right Margin Flash Key	1	E6	583242001		Key (% 5)	1
					E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583344001		Key (/ 7)	1
C2	U05819001		Shift Lock Key	1	E9	583345001		Key ((8)	1
C3	583273001		Key (A)	1	E10	583346001		Key () 9)	1
C4	583274001		Key (S)	1	E11	583347001		Key (= 0)	1
C5	583275001		Key (D)	1	E12	583679001		Key (? +)	1
C6	583276001		Key (F)	1	E13	583349001		Key (` °)	1
C7	583277001		Key (G)	1	E14	U50474001		Back Space Key	1
C8	583278001		Key (H)	1	E15	U50475001		Forward Space Key	1
C9	583279001		Key (J)	1	F1~F5		U06078001	Function Key	5
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

KEY TOP (NORWEGIAN)

Model: CE-68

MAIN-
REF. NO.

ZZ-16-XN-4



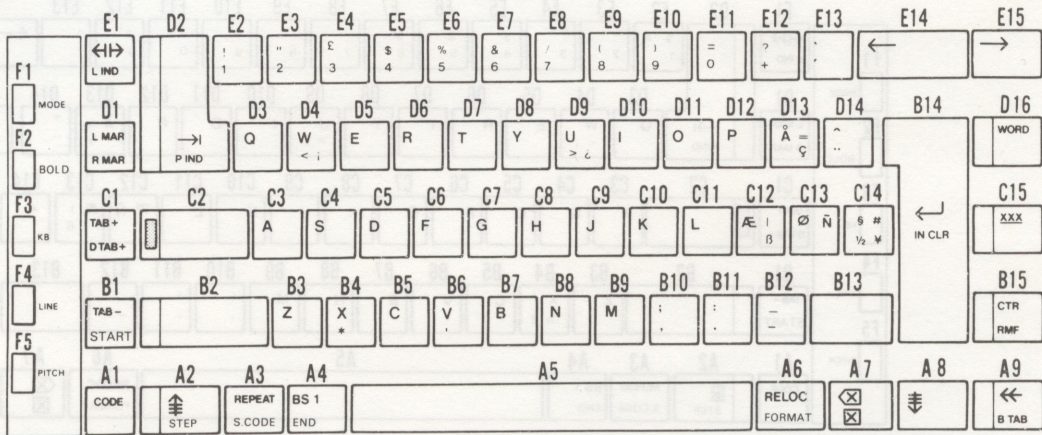
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583682001		Key ($\phi \tilde{N}$)	1
A2	U06719001		Super Script, Step Key	1	C13	583683001		Key ($\mathcal{A} \mid \beta$)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583684001		Key (* ')	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto, Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < i)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
					D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583568001		Key (U > i)	1
B3	583595001		Key (Z)	1	D10	583264001		Key (I)	1
B4	583685001		Key (X $\frac{1}{2}$ $\frac{1}{4}$)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583666001		Key (V !)	1	D13	583680001		Key ($\mathcal{A} = \mathcal{C}$)	1
B7	583292001		Key (B)	1	D14	583681001		Key (^ ' ')	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583361001		Key (; ,)	1	E2	583678001		Key ($\S$ 1 #)	1
B11	583362001		Key (: .)	1	E3	583341001		Key (" 2)	1
B12	583363001		Key (_ -)	1	E4	583584001		Key (£ 3)	1
B13	U50481001		Power Shift Key (R)	1	E5	583241001		Key (\$ 4)	1
B14	U50479001		Return, Indent Clear Key	1	E6	583242001		Key (% 5)	1
B15	583318001		Centering, Right Margin Flash Key	1	E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583344001		Key (/ 7)	1
C2	U05819001		Shift Lock Key	1	E9	583345001		Key ((8)	1
C3	583273001		Key (A)	1	E10	583346001		Key () 9)	1
C4	583274001		Key (S)	1	E11	583347001		Key (= 0)	1
C5	583275001		Key (D)	1	E12	583679001		Key (? +)	1
C6	583276001		Key (F)	1	E13	583349001		Key (` ')	1
C7	583277001		Key (G)	1	E14	U50474001		Back Space Key	1
C8	583278001		Key (H)	1	E15	U50475001		Forward Space Key	1
C9	583279001		Key (J)	1	F1~F5		U06078001	Function Key	5
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

536-681-ZZ-16XN-4

KEY TOP (DANISH)

Model: CE-68

MAIN-REF. NO.		ZZ-16XO-4	
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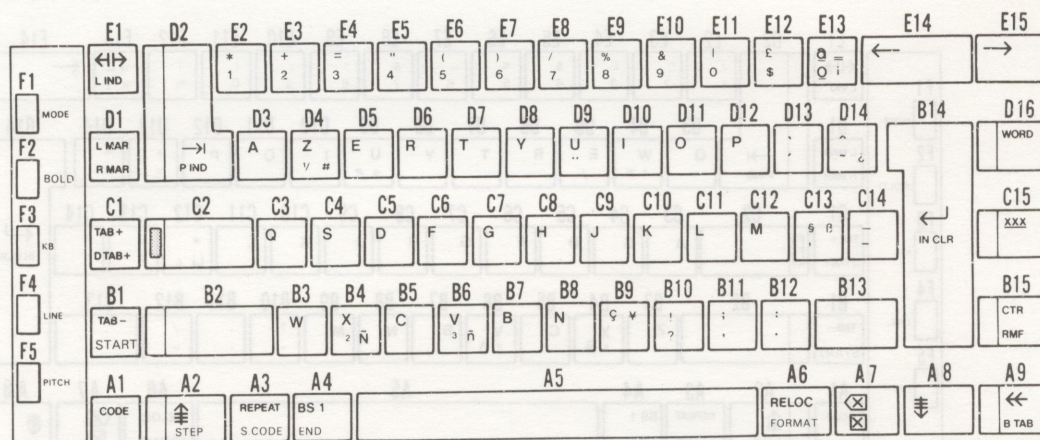
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583683001		Key (Æ ß)	1
A2	U06719001		Super Script, Step Key	1	C13	583682001		Key (ø Ñ)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583707001		Key (§ ½ # ¥)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < i)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
B1	U06718001		Tab Clear, Start Key	1	D6	583260001		Key (R)	1
B2	U50480001		Power Shift Key (L)	1	D7	583261001		Key (T)	1
B3	583595001		Key (Z)	1	D8	583530001		Key (Y)	1
B4	583708001		Key (X *)	1	D9	583568001		Key (U > i)	1
B5	583290001		Key (C)	1	D10	583264001		Key (I)	1
B6	583709001		Key (V ')	1	D11	583265001		Key (O)	1
B7	583292001		Key (B)	1	D12	583266001		Key (P)	1
B8	583293001		Key (N)	1	D13	583680001		Key (Å = ç)	1
B9	583294001		Key (M)	1	D14	583681001		Key (^ ' ')	1
B10	583361001		Key (; ,)	1	D16	U50485001		WORD Key	1
B11	583362001		Key (: .)	1	E1	583305001		Margin Release, Line Indent Key	1
B12	583363001		Key (_ -)	1	E2	U50429001		Key (! 1)	1
B13	U50481001		Power Shift Key (R)	1	E3	583341001		Key (" 2)	1
B14	U50479001		Return, Indent Clear Key	1	E4	583584001		Key (£ 3)	1
B15	583318001		Centering, Right Margin Flash Key	1	E5	583241001		Key (\$ 4)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E6	583242001		Key (% 5)	1
C2	U05819001		Shift Lock Key	1	E7	583343001		Key (& 6)	1
C3	583273001		Key (A)	1	E8	583344001		Key (/ 7)	1
C4	583274001		Key (S)	1	E9	583345001		Key ((8)	1
C5	583275001		Key (D)	1	E10	583346001		Key () 9)	1
C6	583276001		Key (F)	1	E11	583347001		Key (= 0)	1
C7	583277001		Key (G)	1	E12	583679001		Key (? +)	1
C8	583278001		Key (H)	1	E13	583349001		Key (, .)	1
C9	583279001		Key (J)	1	E14	U50474001		Back Space Key	1
C10	583280001		Key (K)	1	E15	U50475001		Forward Space Key	1
C11	583281001		Key (L)	1	F1~F5	U06078001		Function Key	5

KEY TOP (PORTUGUESE)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XP-4



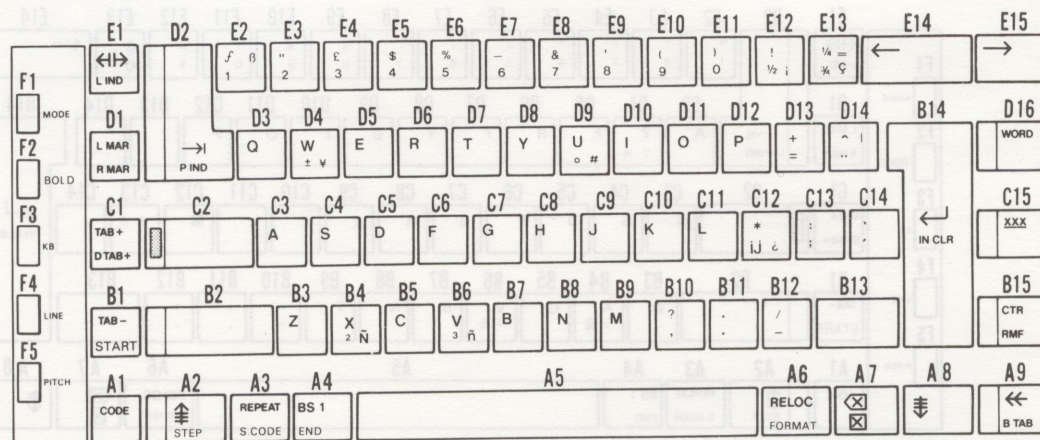
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583535001		Key (M)	1
A2	U06719001		Super Script, Step Key	1	C13	583731001		Key (ç ' β)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583732001		Key (_ -)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	583528001		Key (A)	1
A8	U05612001		Sub Script Key	1	D4	583727001		Key (Z 1/ #)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583728001		Key (U ' ')	1
B3	583538001		Key (W)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² Ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583729001		Key (` ')	1
B7	583292001		Key (B)	1	D14	583730001		Key (^ ~ i)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583733001		Key (ç Y)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583734001		Key (! ?)	1	E2	583606001		Key (* 1)	1
B11	583361001		Key (; ,)	1	E3	583717001		Key (+ 2)	1
B12	583362001		Key (: .)	1	E4	583718001		Key (= 3)	1
B13	U50481001		Power Shift Key (R)	1	E5	583719001		Key (" 4)	1
B14	U50479001		Return, Indent Clear Key	1	E6	583720001		Key ((5)	1
B15	583318001		Centering, Right Margin	1	E7	583721001		Key () 6)	1
			Flash Key		E8	583344001		Key (/ 7)	1
C1	583320001		Tab Set, Decimal Tab Set	1	E9	583722001		Key (% 8)	1
			Key		E10	583723001		Key (& 9)	1
C2	U05819001		Shift Lock Key	1	E11	583724001		Key (0)	1
C3	583534001		Key (Q)	1	E12	583725001		Key (£ \$)	1
C4	583274001		Key (S)	1	E13	583726001		Key (a o = i)	1
C5	583275001		Key (D)	1	E14	U50474001		Back Space Key	1
C6	583276001		Key (F)	1	E15	U50475001		Forward Space Key	1
C7	583277001		Key (G)	1				Function Key	5
C8	583278001		Key (H)	1	F1~F5		U06078001		
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

KEY TOP (DUTCH)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XQ-4



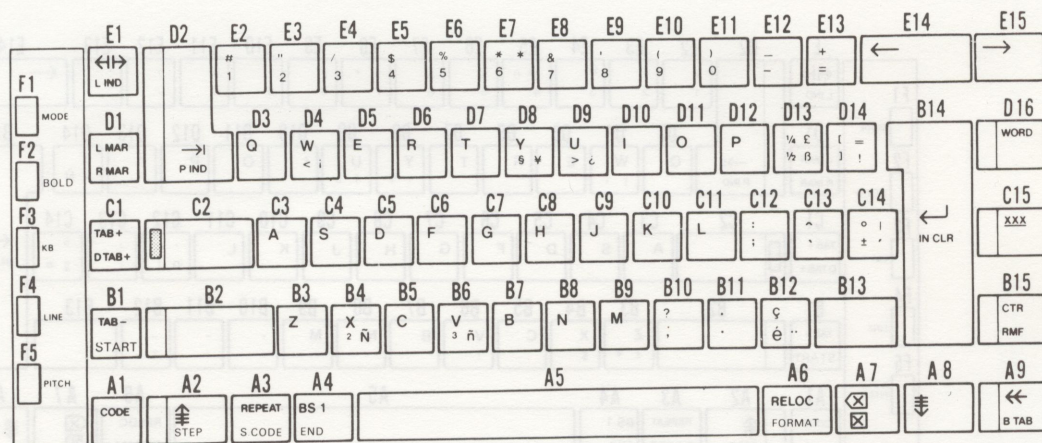
SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583593001		Key (* j i)	1
A2	U06719001		Super Script, Step Key	1	C13	583569001		Key (: ;)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583594001		Key (` ')	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583589001		Key (W ± ½)	1
A9	U06096001		Express Back Space, Back Tab Key	1	D5	583259001		Key (E)	1
B1	U06718001		Tab Clear, Start Key	1	D6	583260001		Key (R)	1
				D7	583261001		Key (T)	1	
B2	U50480001		Power Shift Key (L)	1	D8	583530001		Key (Y)	1
				D9	583590001		Key (U ° #)	1	
B3	583595001		Key (Z)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² Ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583591001		Key (+ =)	1
B7	583292001		Key (B)	1	D14	583592001		Key (^ ' ')	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583539001		Key (? ,)	1	E2	583583001		Key (f 1 β)	1
B11	583332001		Key (. .)	1	E3	583341001		Key (" 2)	1
B12	583596001		Key (/ -)	1	E4	583584001		Key (£ 3)	1
B13	U50481001		Power Shift Key (R)	1	E5	583241001		Key (\$ 4)	1
B14	U50479001		Return, Indent Clear Key	1	E6	583242001		Key (% 5)	1
B15	583318001		Centering, Right Margin Flash Key	1	E7	583585001		Key (_ 6)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583244001		Key (& 7)	1
				E9	583586001		Key (' 8)	1	
C2	U05819001		Shift Lock Key	1	E10	583246001		Key ((9)	1
C3	583273001		Key (A)	1	E11	583247001		Key () 0)	1
C4	583274001		Key (S)	1	E12	583587001		Key (! ½ i)	1
C5	583275001		Key (D)	1	E13	583588001		Key (¼ ¾ = ¢)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

KEY TOP (BILINGUAL)

Model: CE-58

MAIN-
REF. NO.

ZZ-16XR-4



SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583569001		Key (: ;)	1
A2	U06719001		Super Script, Step Key	1	C13	583603001		Key (^ `)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583604001		Key (° ± 1 ')	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < i)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583600001		Key (Y § ¥)	1
B2	U50480001		Power Shift Key (L)	1	D9	583568001		Key (U > i)	1
B3	583595001		Key (Z)	1	D10	583264001		Key (I)	1
B4	583359001		Key (X ² Ñ)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583360001		Key (V ³ ñ)	1	D13	583601001		Key (¼ ½ £ β)	1
B7	583292001		Key (B)	1	D14	583602001		Key ([] = !)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583539001		Key (? ,)	1					
B11	583332001		Key (. .)	1	E2	583597001		Key (# 1)	1
B12	583605001		Key (ç é ' ')	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	583598001		Key (/ 3)	1
B14	U50479001		Return, Indent Clear Key	1	E5	583241001		Key (\$ 4)	1
B15	583318001		Centering, Right Margin	1	E6	583242001		Key (% 5)	1
			Flash Key		E7	583599001		Key (* 6 *)	1
C1	583320001		Tab Set, Decimal Tab Set Key	1	E8	583244001		Key (& 7)	1
					E9	583586001		Key (' 8)	1
C2	U05819001		Shift Lock Key	1	E10	583246001		Key ((9)	1
C3	583273001		Key (A)	1	E11	583247001		Key () 0)	1
C4	583274001		Key (S)	1	E12	583565001		Key (_ -)	1
C5	583275001		Key (D)	1	E13	583249001		Key (+ =)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

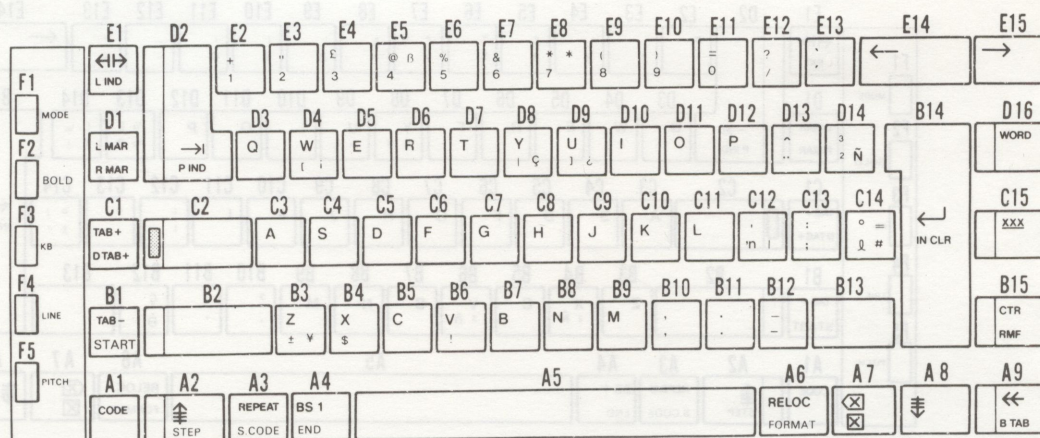
536-681-ZZ-16XR-4

KEY TOP (SOUTH AFRICAN)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XS-4



SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	583714001		Key (' h l)	1
A2	U06719001		Super Script, Step Key	1	C13	583569001		Key (: ;)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	583715001		Key (° ¢ = #)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583610001		Key (W [i)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583712001		Key (Y i ç)	1
B2	U50480001		Power Shift Key (L)	1	D9	583578001		Key (U] ì)	1
B3	583616001		Key (Z ± ¥)	1	D10	583264001		Key (I)	1
B4	583716001		Key (X \$)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	583686001		Key (V !)	1	D13	583681001		Key (^)	1
B7	583292001		Key (B)	1	D14	583713001		Key (3 2 Ñ)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent Key	1
B10	583571001		Key (, ,)	1					
B11	583332001		Key (. .)	1	E2	583664001		Key (+ 1)	1
B12	583363001		Key (_ _)	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	583584001		Key (£ 3)	1
B14	U50479001		Return, Indent Clear Key	1	E5	583607001		Key (@ 4 ¢)	1
B15	583318001		Centering, Right Margin	1	E6	583242001		Key (% 5)	1
			Flash Key		E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set	1	E8	583710001		Key (* 7 *)	1
			Key		E9	583345001		Key ((8)	1
C2	U05819001		Shift Lock Key	1	E10	583346001		Key () 9)	1
C3	583273001		Key (A)	1	E11	583347001		Key (= 0)	1
C4	583274001		Key (S)	1	E12	583711001		Key (? /)	1
C5	583275001		Key (D)	1	E13	583349001		Key (` ')	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

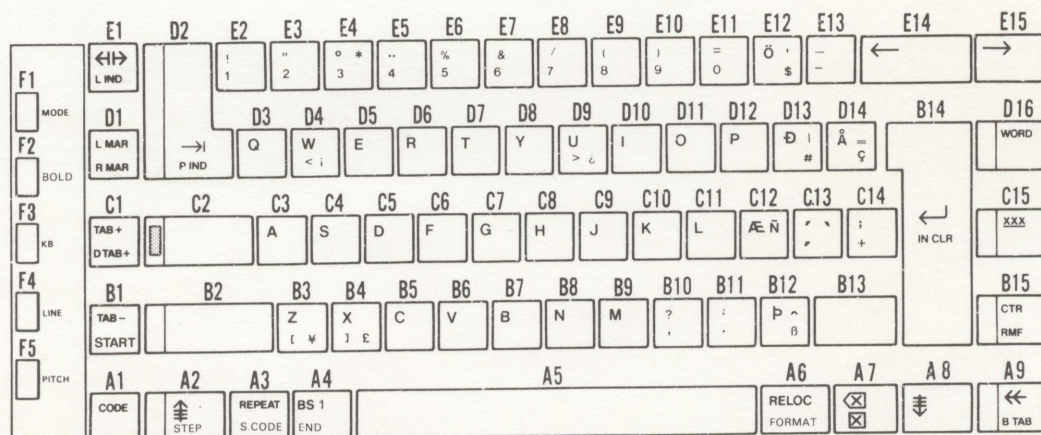
536-681-ZZ-16XS-4

KEY TOP (ICELANDIC)

Model: CE-68

MAIN-
REF. NO.

ZZ-16XT-4



SUB-REF. NO.	CODE		NAME	Q'TY	SUB-REF. NO.	CODE		NAME	Q'TY
	COLOR FOR KEY					COLOR FOR KEY			
	Black					Black	Green		
A1	U05621001		Code Key	1	C12	U06062001		Key (Æ Ñ)	1
A2	U06719001		Super Script, Step Key	1	C13	U06063001		Key (' `)	1
A3	U06720001		Repeat, Stop Code Key	1	C14	U06064001		Key (; +)	1
A4	U06721001		Back Space 1, End Key	1	C15	U06724001		Auto Underlining Key	1
A5	U05616001		Space Bar	1	D1	583312001		Left, Right Margin Set Key	1
A6	U06722001		Relocation, Format Key	1	D2	U50477001		Tab, Paragraph Indent Key	1
A7	U06157001		Correction Key	1	D3	U50431001		Key (Q)	1
A8	U05612001		Sub Script Key	1	D4	583566001		Key (W < ;)	1
A9	U06096001		Express Back Space, Back	1	D5	583259001		Key (E)	1
			Tab Key		D6	583260001		Key (R)	1
B1	U06718001		Tab Clear, Start Key	1	D7	583261001		Key (T)	1
					D8	583530001		Key (Y)	1
B2	U50480001		Power Shift Key (L)	1	D9	583568001		Key (U > ;)	1
B3	U06067001		Key (Z [Y)	1	D10	583264001		Key (I)	1
B4	U06068001		Key (X] £)	1	D11	583265001		Key (O)	1
B5	583290001		Key (C)	1	D12	583266001		Key (P)	1
B6	U06065001		Key (V)	1	D13	U06061001		Key (Ð #)	1
B7	583292001		Key (B)	1	D14	583680001		Key (Å Æ ç)	1
B8	583293001		Key (N)	1	D16	U06723001		WORD Key	1
B9	583294001		Key (M)	1	E1	583305001		Margin Release, Line Indent	1
B10	583539001		Key (? ,)	1				Key	
B11	583362001		Key (: ;)	1	E2	U50429001		Key (! 1)	1
B12	U06066001		Key (ð ~ ß)	1	E3	583341001		Key (" 2)	1
B13	U50481001		Power Shift Key (R)	1	E4	U06058001		Key (° 3 *)	1
B14	U50479001		Return, Indent Clear Key	1	E5	U06059001		Key (" 4)	1
B15	583318001		Centering, Right Margin	1	E6	583242001		Key (% 5)	1
			Flash Key		E7	583343001		Key (& 6)	1
C1	583320001		Tab Set, Decimal Tab Set	1	E8	583344001		Key (/ 7)	1
			Key		E9	583345001		Key ((8)	1
C2	U05819001		Shift Lock Key	1	E10	583346001		Key () 9)	1
C3	583273001		Key (A)	1	E11	583347001		Key (= 0)	1
C4	583274001		Key (S)	1	E12	U06060001		Key (ö ' \$)	1
C5	583275001		Key (D)	1	E13	583565001		Key (_)	1
C6	583276001		Key (F)	1	E14	U50474001		Back Space Key	1
C7	583277001		Key (G)	1	E15	U50475001		Forward Space Key	1
C8	583278001		Key (H)	1	F1~F5		U06078001	Function Key	5
C9	583279001		Key (J)	1					
C10	583280001		Key (K)	1					
C11	583281001		Key (L)	1					

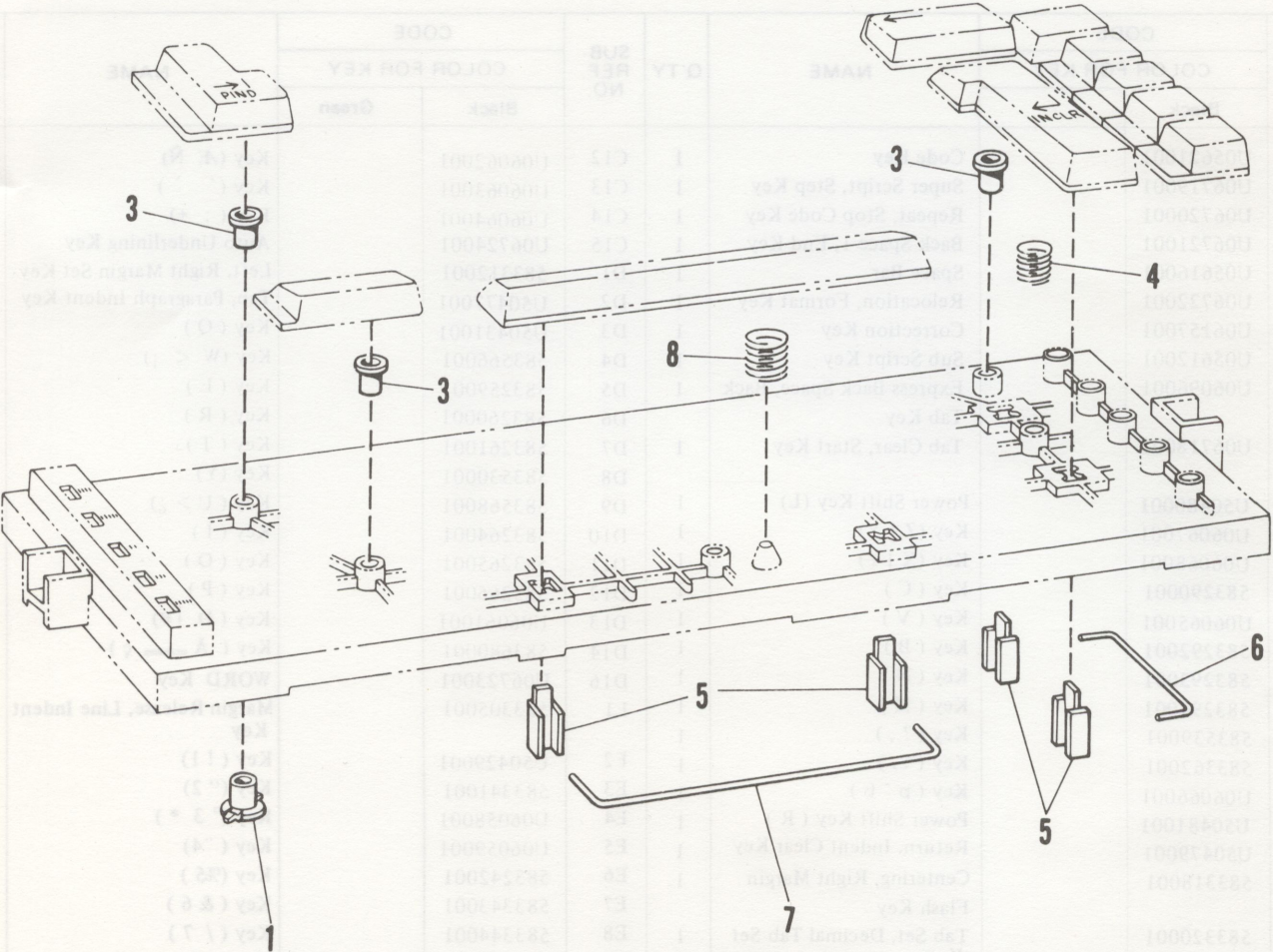
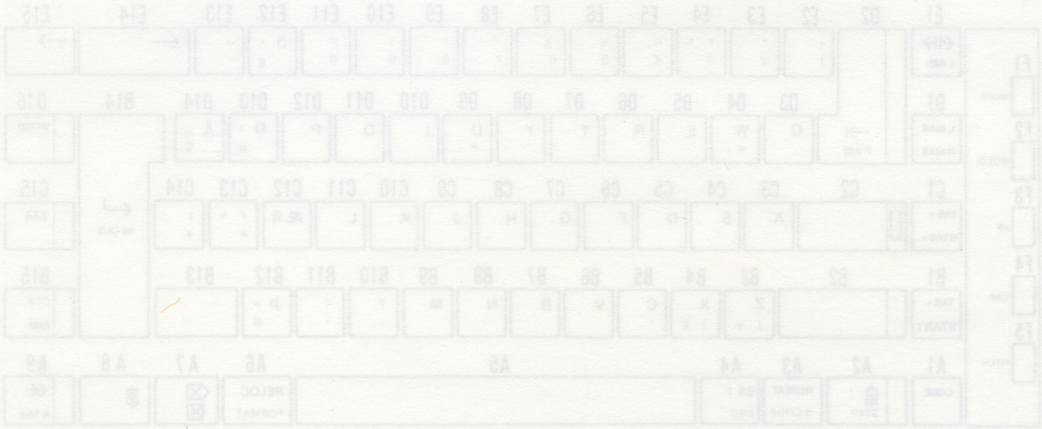
536-681-ZZ-16XT-4

KEY TOP ATTACHMENT

Model: CE-58, CE-68

MAIN- REF. NO.	SI-003
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MAIN- REF. NO.	22-16XT-4
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

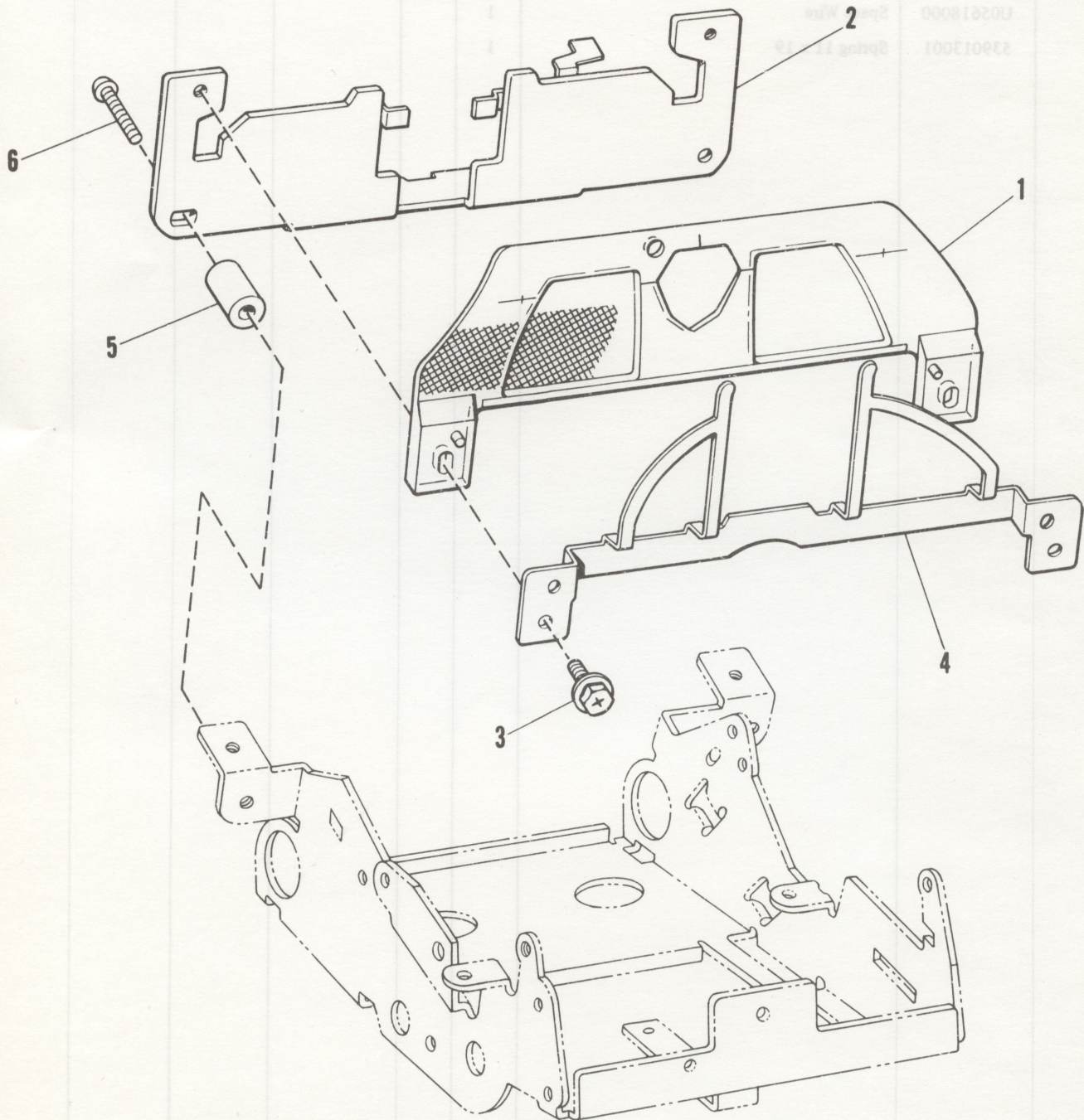
MAIN-REF. NO.	SI-003	Functional group name	KEY TOP ATTACHMENT					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U05601000	Key Stem	69					
3	U05604000	Sub Stem	3					
4	539211001	Spring 10.85 x 19	4					
5	U05617000	Space Key Lever	4					
6	U05824000	Return Key Wire	1					
7	U05618000	Space Wire	1					
8	539013001	Spring 11 x 19	1					

536-681-003

PAPER METER

Model: CE-58, CE-68

MAIN- REF. NO.	SF-016
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

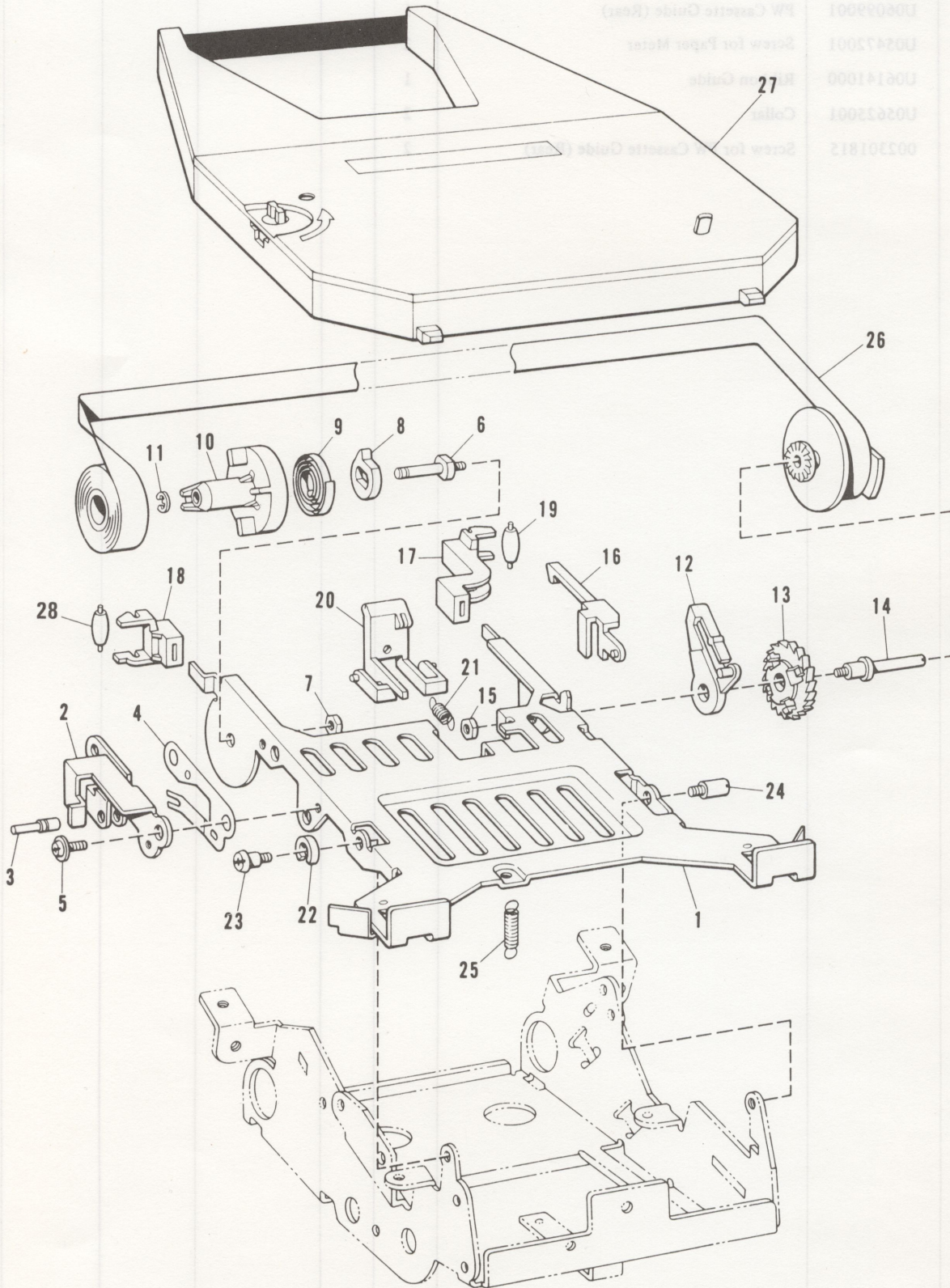
MAIN-REF. NO.	SF-016	Functional group name	PAPER METER					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U06379001	Paper Meter (Plastic)	1					
1-1	U08131001	Paper Meter/Ribbon Guide Unit (Steel)	1					
2	U06099001	PW Cassette Guide (Rear)	1					
3	U05472001	Screw for Paper Meter	2					
4	U06141000	Ribbon Guide	1					
5	U05625001	Collar	2					
6	002301815	Screw for PW Cassette Guide (Rear)	2					

536-701-016

RIBBON FEED MECHANISM

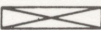
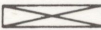
Model: CE-58, CE-68

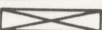
MAIN-REF. NO.	SF-017
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SF-017-(1)	Functional group name	RIBBON FEED MECHANISM					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
(1 ~ 21)	U06097001	Ribbon Vibrator Unit	1					
1	U06098001	Ribbon Vibrator Spot Unit	1					
2	U05628001	Ribbon Lift Cam Follower Unit	1					
3	U05631001	Ribbon Lift Cam Follower Pin	1					
4	U05632000	Spring for Ribbon Lift Cam Follower	1					
5	543867001	Screw for Ribbon Lift Cam Follower	2					
6	U05633001	Correction Spool Axle	1					
7	021300106	Nut for Correction Spool Axle	1					
8	542300001	Correction Spool Axle Collar	1					
(9 ~ 10)	U02720001	Correction Spool Spindle with Spiral Spring	1					
9	U02719001	Spiral Spring	1					
10	542302001	Correction Spool Spindle	1					
11	048020346	Snap Ring for Correction Spool Spindle	1					
12	U05636001	Correction Feed Pawl	1					
13	U05634001	Correction Spool Stop Wheel	1					
14	U05635001	Correction Spool Stop Wheel Axle	1					
15	021300106	Nut for Correction Spool Stop Wheel Axle	1					
16	U05637001	Correction Wheel Stop Pawl	1					
17	U05638001	Correction Guide R	1					
18	U05639001	Correction Guide L	1					
19	U05640001	Correction Guide Roller R	1					
20	U05641001	Ribbon Cassette Lock Pawl	1					
21	534421001	Spring for Ribbon Cassette Lock Pawl	1					
22	U05642001	Spacer	1					
23	U05643001	Shoulder Screw for Ribbon Vibrator Axle L	1					
24	U05644001	Shoulder Screw for Ribbon Vibrator Axle R	1					
25	516698001	Spring for Ribbon Vibrator	1					
26		Correction Tape	1					
27		Cassette Ribbon Complete	1					
28	U06327001	Correction Guide Roller L	1					

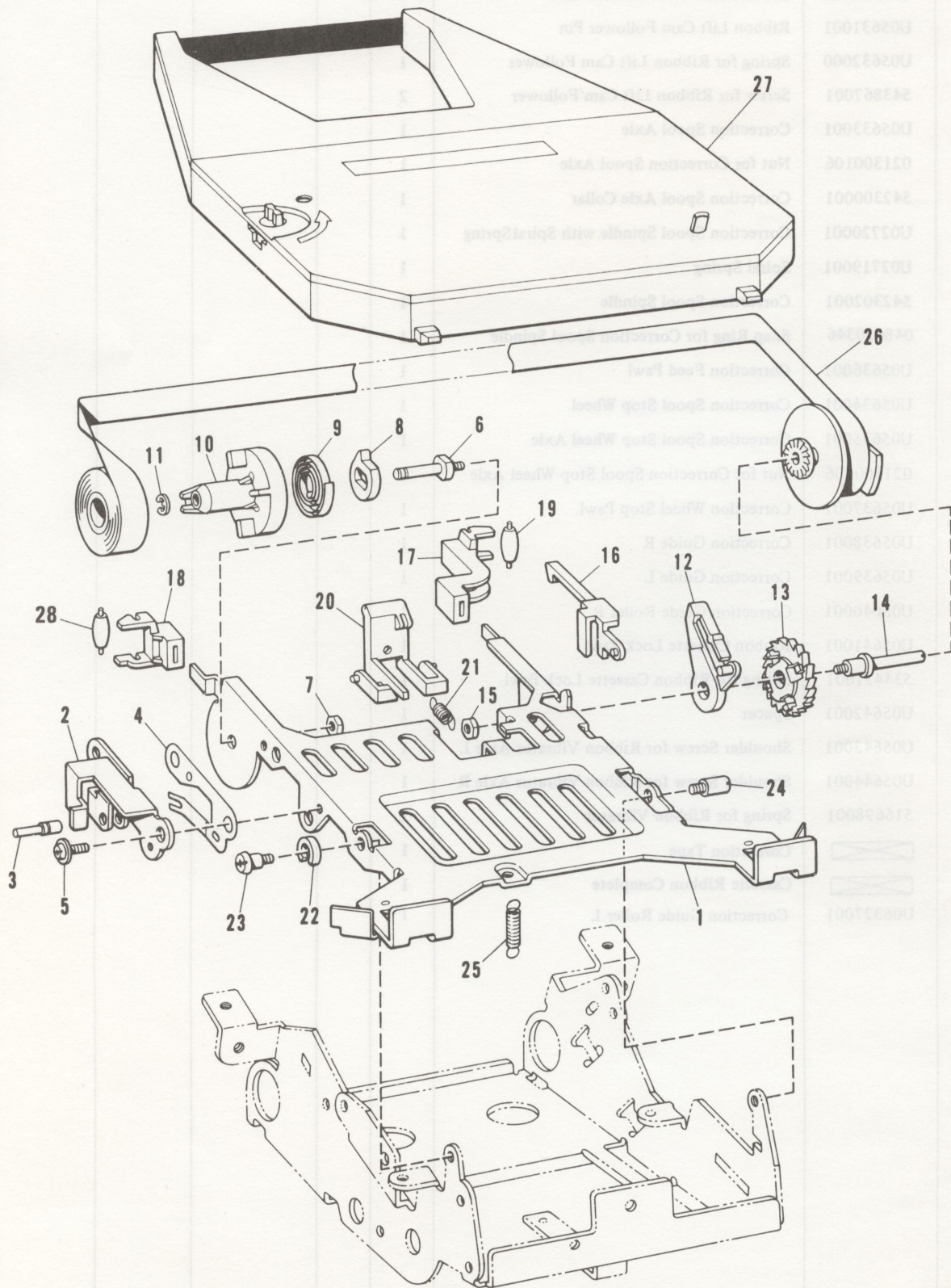
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-701-017

RIBBON FEED MECHANISM

Model: CE-58, CE-68

MAIN- REF. NO.	SF-017
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SF-017-(2)	Functional group name	RIBBON FEED MECHANISM
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SPECIAL PARTS

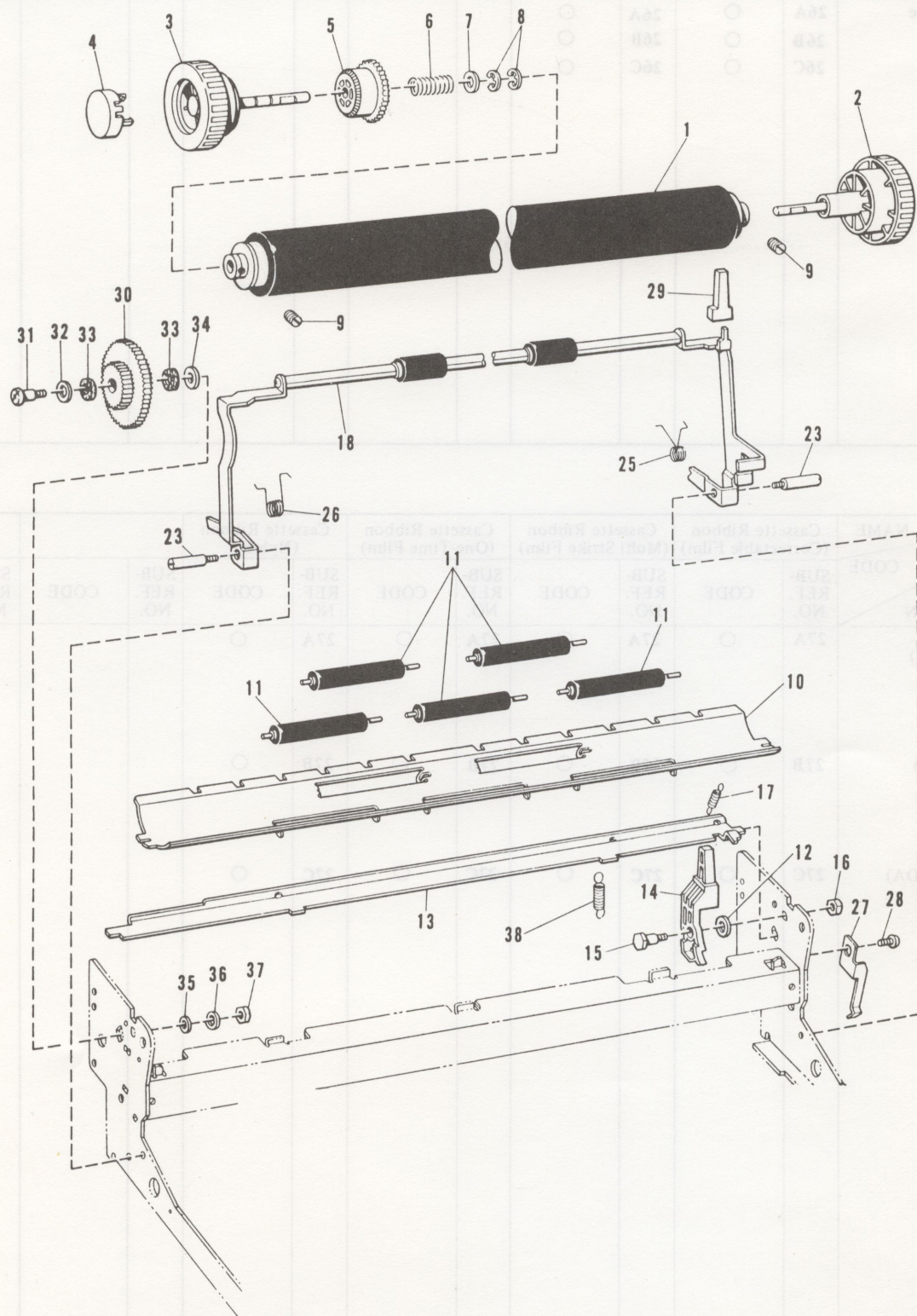
NAME CODE COLOR & DESCRIPTION	Correction Tape (Lift-off Tape)		Correction Tape (Cover-up Tape)									
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Others, Europe	26A	○	26A	○								
U.S.A.	26B	○	26B	○								
CANADA	26C	○	26C	○								

NAME CODE COLOR & DESCRIPTION	Cassette Ribbon (Correctable Film)		Cassette Ribbon (Multi Strike Film)		Cassette Ribbon (One-Time Film)		Cassette Ribbon (Nylon)					
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Black (Others, Europe)	27A	○	27A	○	27A	○	27A	○				
Black (U.S.A.)	27B	○	27B	○	27B	○	27B	○				
Black (CANADA)	27C	○	27C	○	27C	○	27C	○				

PLATEN MECHANISM

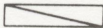
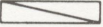
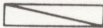
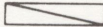
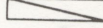
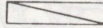
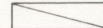
Model: CE-58, CE-68

MAIN-REF. NO.	SF-031
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN- REF. NO.	SF-031-(1)	Functional group name	PLATEN MECHANISM					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U05645001	Platen 13	1					
2		Platen Knob Unit (R)	1					
(3 ~ 8)		Platen Knob Unit (L)	1					
3		Platen Knob L	1					
4		Platen Release Push Button	1					
5		Line Feed Driven Gear	1					
6	534458001	Spring for Line Feed Driven Gear	1					
7	510061001	Washer for Spring	1					
8	048040346	Snap Ring for Spring	2					
9		Screw for Platen Knob	2					
10	U05655001	Paper Pan 13	1					
11	U05656001	Paper Feed Roller	5					
12	514196000	Washer for Paper Release Lever	1					
13	U05657000	Paper Pan Holding Plate	1					
14	U05658001	Paper Release Lever	1					
15	U05659001	Shoulder Screw for Paper Release Lever	1					
16	021350106	Nut for Shoulder Screw	1					
17	515901001	Spring for Paper Release Lever	1					
18	U06102001	Paper Bail Scale 13	1					
23	U06207001	Axle Screw for Paper Bail Scale Arm	2					
25	U05666001	Spring for Paper Bail Scale Arm R	1					
26	U05667001	Spring for Paper Bail Scale Arm L	1					
27	U05668001	Plate Spring for Paper Bail Scale Arm	1					
28	002300403	Screw for Plate Spring	1					
29	U05669001	Tip for Paper Bail Scale	1					
30		Line Feed Intermediate Gear	1					
31	U05671001	Shoulder Screw for Line Feed Intermediate Gear	1					
32	523352000	Washer for Line Feed Intermediate Gear	1					
33	511146001	Felt	2					
34	514196000	Washer for Shoulder Screw	1					

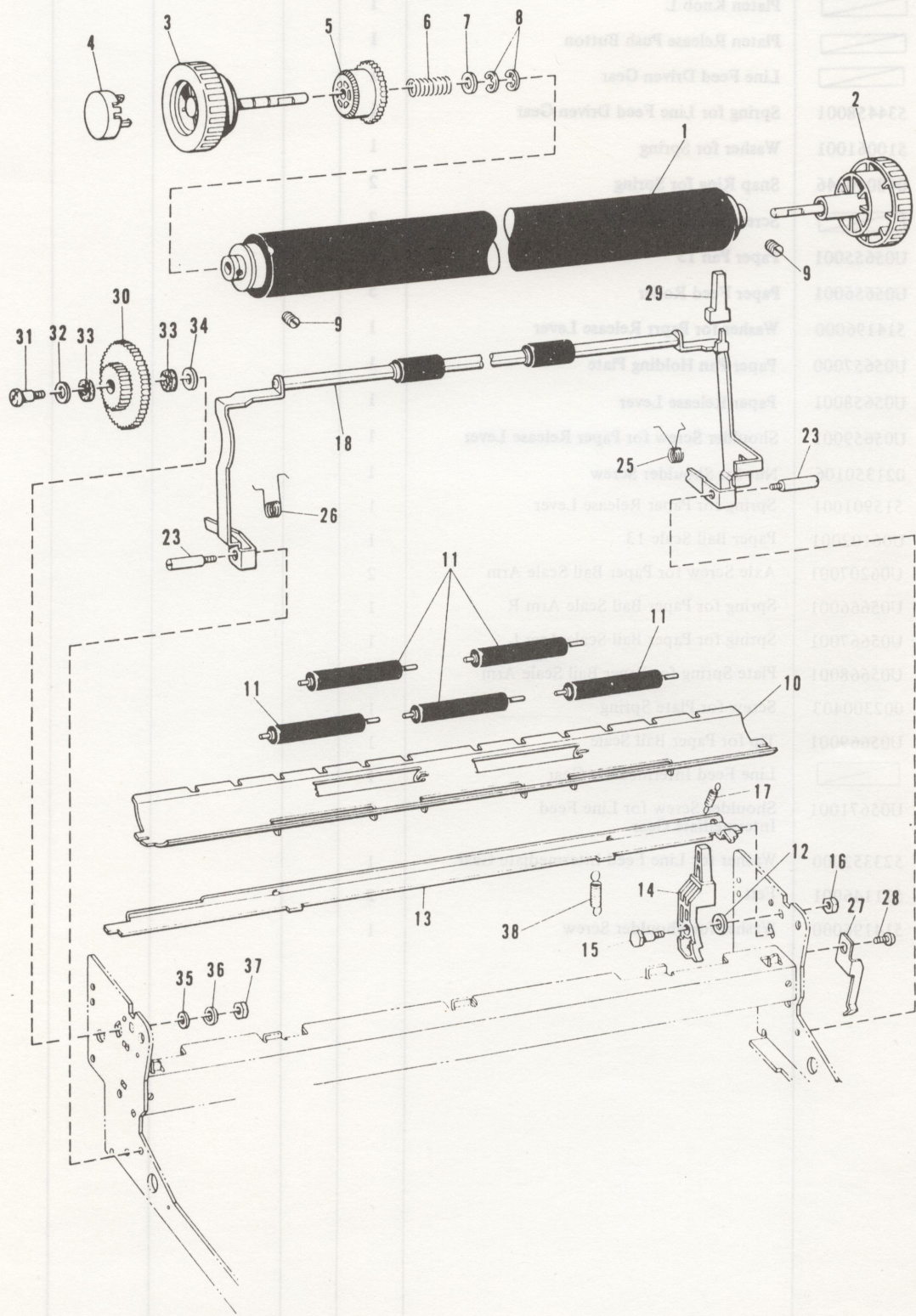
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-701-031

PLATEN MECHANISM

Model: CE-58, CE-68

MAIN- REF. NO.	SF-031
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SF-031-(2)	Functional group name	PLATEN MECHANISM					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
35	025350136	Small Washer for Shoulder Screw	1					
36	028350246	Spring Washer for Shoulder Screw	1					
37	021350106	Nut for Shoulder Screw	1					
38	U05619001	Spring for Paper Pan Holding Plate	2					

SPECIAL PARTS

NAME CODE COLOR & DESCRIPTION	Platen Knob Unit (R)		Platen Knob Unit (L) (ITALY only)		Platen Knob Unit (L) (Others)		Platen Knob (L)		Platen Release Push Button			
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Black (010)	2A	U05648002	(3~8)A	U05990002	(3~8)A	U05650002	3A	U05651002	4A	U05653002		

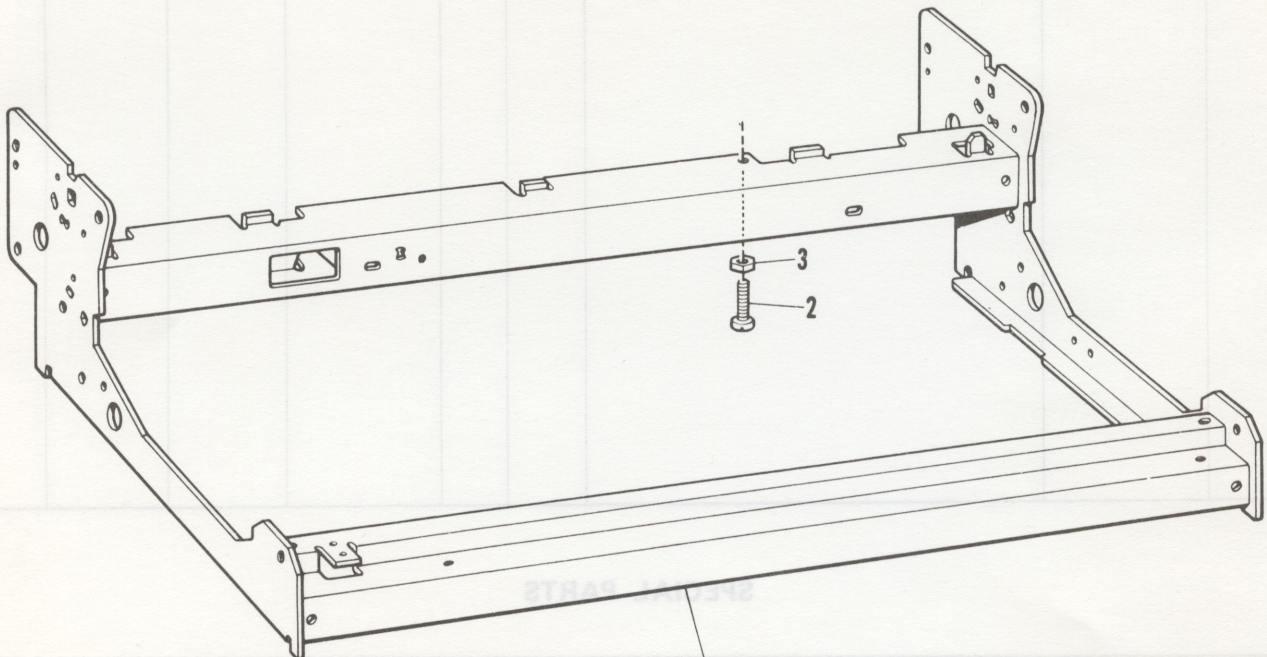
NAME CODE COLOR & DESCRIPTION	Line Feed Driven Gear		Line Feed Intermediate Gear		Screw for Platen Knob							
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Italy only	5A	U05991000	30A	U05992000								
Others	5B	U05654001	30B	U05670001	9A	525745001						
Finland & Norway Only					9B	013400612						

CHASSIS

Model: CE-58, CE-68

MAIN-
REF. NO.

SF-033



PARTS CODE & PARTS NAME

Model: CE-58, CE-68

Model: CE-58, CE-68								
MAIN- REF. NO.	SF-033	Functional group name	CHASSIS					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U06103001	Chassis	1					
2	062351006	Screw for Paper Pan Holding Plate	1					
3	021350106	Nut for Screw	1					

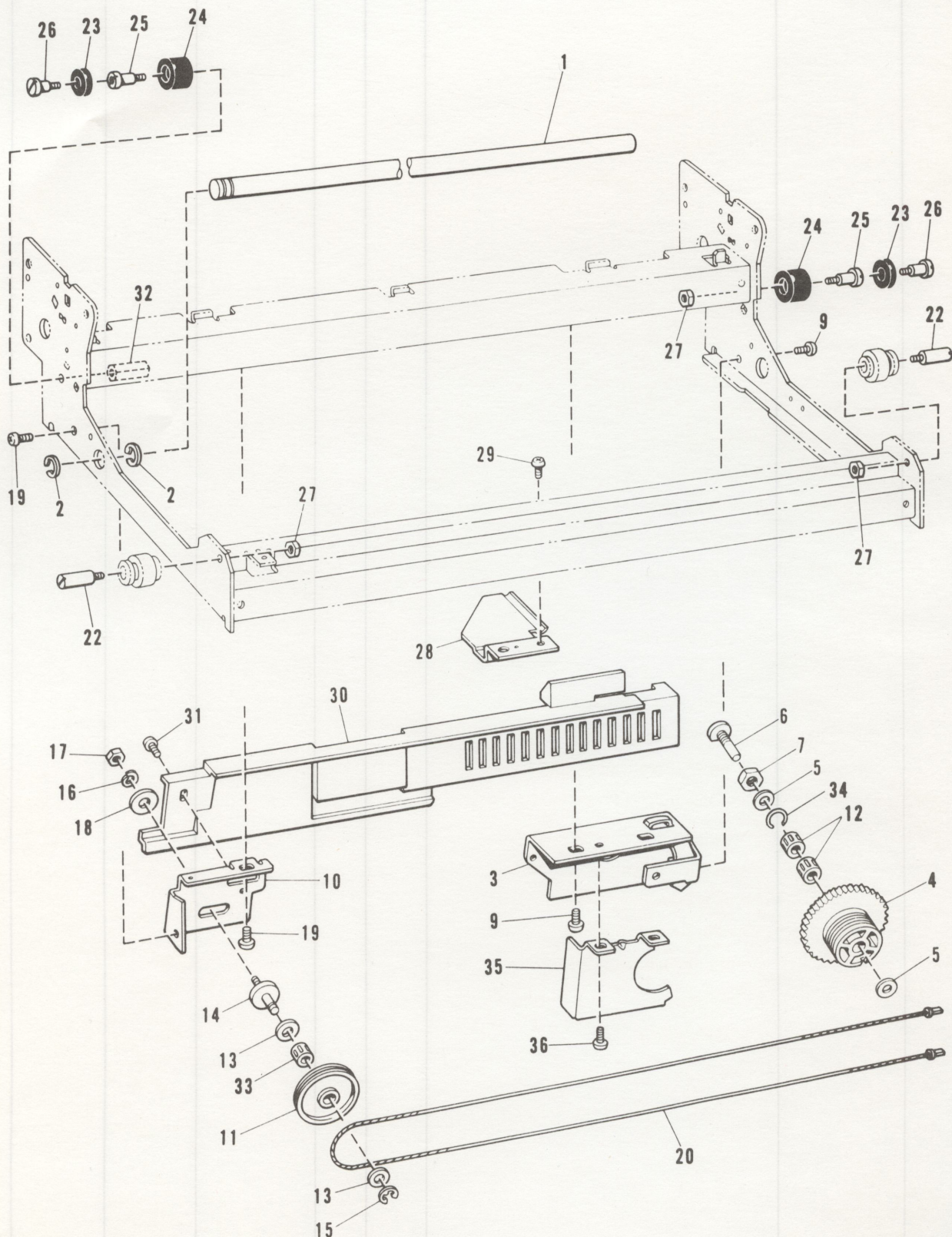
536-701-033

CHASSIS ATTACHMENT

Model: CE-58, CE-68

MAIN-
REF. NO.

SA-034



PARTS CODE & PARTS NAME

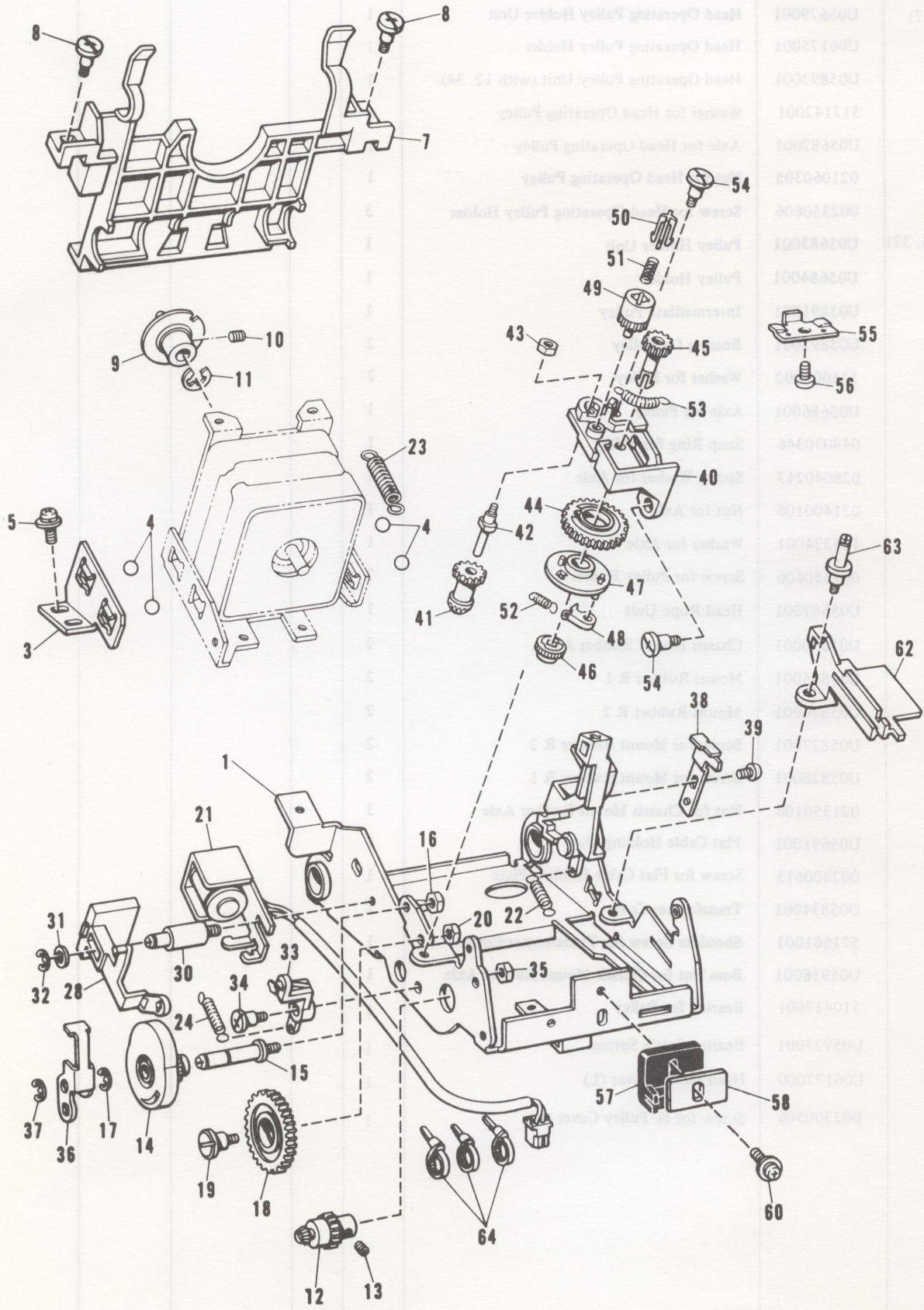
Model: CE-58, CE-68

MAIN- REF. NO.	SA-034	Functional group name	CHASSIS ATTACHMENT					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U05678001	Axle for Head Guide	1					
2	U05829001	Snap Ring for Head Guide Axle	2					
(3 ~ 7)	U05679001	Head Operating Pulley Holder Unit	1					
3	U06175001	Head Operating Pulley Holder	1					
4	U05893001	Head Operating Pulley Unit (with 12, 34)	1					
5	517142001	Washer for Head Operating Pulley	2					
6	U05682001	Axle for Head Operating Pulley	1					
7	021060305	Nut for Head Operating Pulley	1					
9	002350606	Screw for Head Operating Pulley Holder	3					
(10 ~ 18, 33)	U05683001	Pulley Holder Unit	1					
10	U05684001	Pulley Holder	1					
11	U05891001	Intermediate Pulley	1					
12	U05892001	Bearing for Pulley	2					
13	535009002	Washer for Pulley	2					
14	U05686001	Axle for Pulley	1					
15	048030346	Snap Ring for Pulley	1					
16	028040243	Spring Washer for Axle	1					
17	021400106	Nut for Axle	1					
18	125324001	Washer for Axle	1					
19	002350606	Screw for Pulley Holder	2					
20	U05687001	Head Rope Unit	1					
22	U05690001	Chassis Mount Rubber Axle	2					
23	U05825001	Mount Rubber R 1	2					
24	U05826001	Mount Rubber R 2	2					
25	U05827001	Screw for Mount Rubber R 2	2					
26	U05828001	Screw for Mount Rubber R 1	2					
27	021350106	Nut for Chassis Mount Rubber Axle	3					
28	U05691001	Flat Cable Holding Plate	1					
29	002300615	Screw for Flat Cable Holding Plate	1					
30	U05834001	Transformer Cover	1					
31	571661001	Shoulder Screw for Transformer Cover	1					
32	U05916001	Boss Nut for Chassis Mount Rubber Axle	1					
33	510417001	Bearing for Pulley	1					
34	U05927001	Bearing Settle Spring	1					
35	U06177000	Head Pulley Cover (L)	1					
36	002300506	Screw for H. Pulley Cover (L)	1					

HEAD MECHANISM

Model: CE-58, CE-68

MAIN- REF. NO.	SF-043
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SF-043-(1)	Functional group name	HEAD MECHANISM					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U05704001	Head Holder Unit	1					
3	U05709001	Motor Holder Guide	1					
4	U02119001	Ball	4					
5	533777001	Screw for Motor Holder Guide	2					
7	U05711001	PW Cassette Guide	1					
8	U05712001	Axle Screw for PW Cassette Guide	2					
9	U08182001	PW Flange	1					
10	014400430	Screw for PW Flange	1					
11	U00318001	Snap Ring for PW Flange	1					
12	U05713001	Ribbon Lift Operating Gear	1					
13	525747001	Screw for Ribbon Lift Operating Gear	1					
14	U05715001	Ribbon Lift Cam Gear	1					
15	U05716001	Axle Screw for Ribbon Lift Cam Gear	1					
16	021300106	Nut for Axle Screw	1					
17	048030346	Snap Ring for Ribbon Lift Cam Gear	1					
18	U05717001	Ribbon Lift Gear	1					
19	U05718001	Axle for Ribbon Lift Gear	1					
20	021300106	Nut for Axle	1					
21	U05747001	Correction Solenoid Unit	1					
22	511052001	Spring for Motor Lock Lever	1					
23	U05906001	Spring for Motor Holder	1					
24	U01501001	Spring for Correction Trigger Link	1					
28	U05719001	Correction Operating Plate Unit	1					
30	U05722001	Axle for Correction Operating Plate	1					
31	205416001	Washer for Correction Operating Plate	1					
32	048030346	Snap Ring for Correction Operating Plate	1					
33	U05723001	Correction Trigger Link	1					
34	U05724001	Axle for Correction Trigger Link	1					
35	021300106	Nut for Axle	1					
36	U05725001	Ribbon Vibrator Locker	1					
37	048030346	Snap Ring for Ribbon Vibrator Locker	1					
38	U05726000	Correction Feed Crank Guide	1					
39	002300615	Screw for Correction Feed Crank Guide	1					
(40 ~ 53)	U05727001	Ribbon Feed Gear Base Assembly	1					
40	U05728001	Ribbon Feed Gear Base	1					

PARTS CODE & PARTS NAME

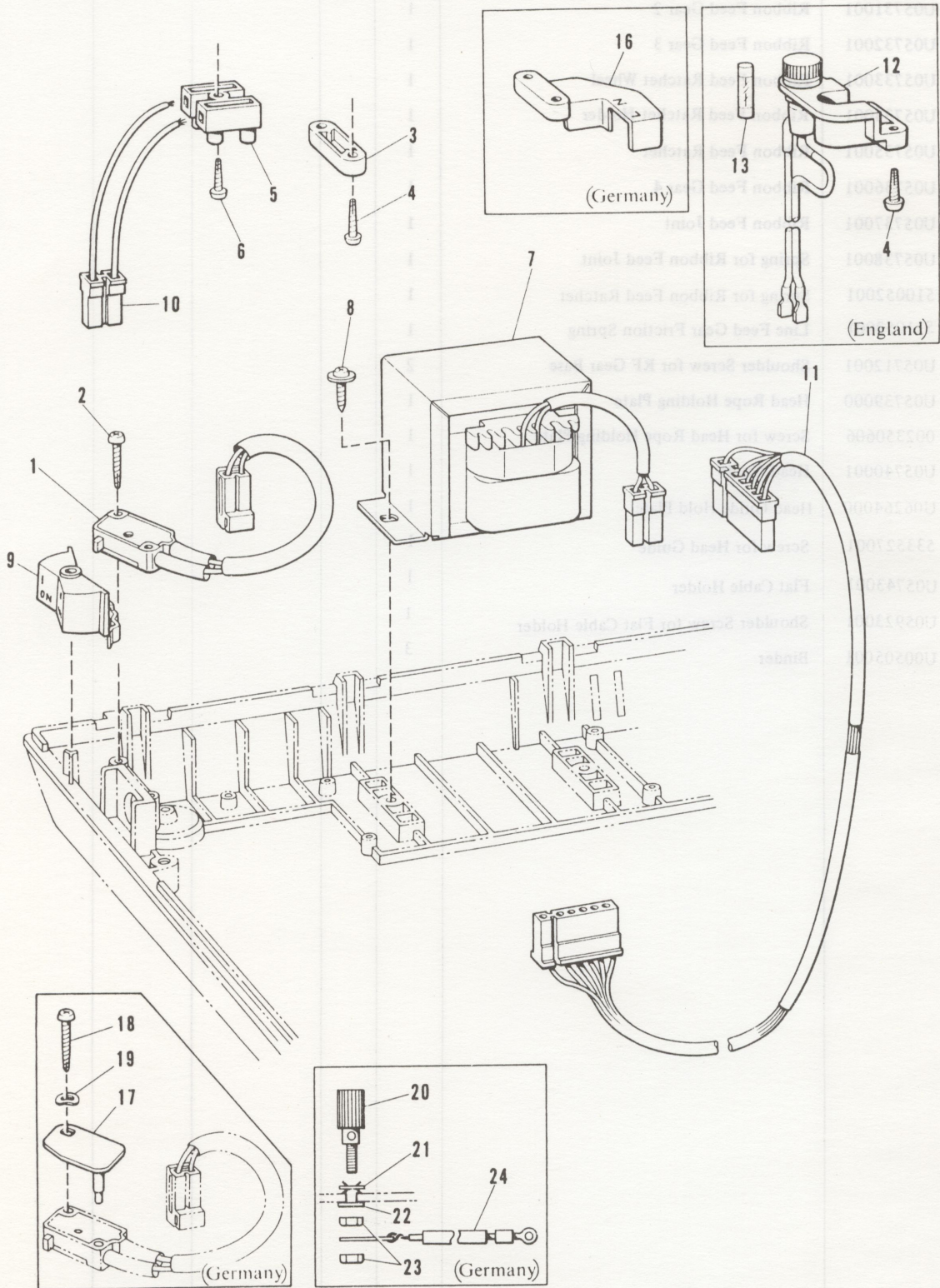
Model: CE-58, CE-68

MAIN- REF. NO.	SF-043-(2)	Functional group name	HEAD MECHANISM					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
41	U05729001	Ribbon Feed Gear 1	1					
42	U05730001	Axle Screw for Ribbon Feed Gear 1	1					
43	021260106	Nut for Ribbon Feed Gear 1	1					
44	U05731001	Ribbon Feed Gear 2	1					
45	U05732001	Ribbon Feed Gear 3	1					
46	U05733001	Ribbon Feed Ratchet Wheel	1					
47	U05734001	Ribbon Feed Ratchet Holder	1					
48	U05735001	Ribbon Feed Ratchet	1					
49	U05736001	Ribbon Feed Gear 4	1					
50	U05737001	Ribbon Feed Joint	1					
51	U05738001	Spring for Ribbon Feed Joint	1					
52	510052001	Spring for Ribbon Feed Ratchet	1					
53	511052001	Line Feed Gear Friction Spring	1					
54	U05712001	Shoulder Screw for RF Gear Base	2					
55	U05739000	Head Rope Holding Plate	1					
56	002350606	Screw for Head Rope Holding Plate	1					
57	U05740001	Head Guide	1					
58	U06264000	Head Guide Hold Plate	1					
60	533527001	Screw for Head Guide	1					
62	U05743001	Flat Cable Holder	1					
63	U05923001	Shoulder Screw for Flat Cable Holder	1					
64	U00505001	Binder	3					

ELECTRICAL COMPONENT

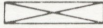
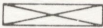
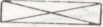
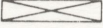
Model: CE-58, CE-68

MAIN-REF. NO.	SI-050
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

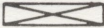
MAIN-REF. NO.	SI-050	Functional group name	ELECTRICAL COMPONENT					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Cord Switch Unit	1					
2	037301615	Screw for Cord Switch Unit	2					
3	571852001	Cord Holder	1					
4	037301615	Screw for Cord Holder	2					
5	U00414001	Terminal Base	1					
6	037301615	Screw for Terminal Base	1					
7		Transformer Unit	1					
8	U02082001	Screw for Transformer	2					
9		Power Switch Lever	1					
10		AC Wire Unit	1					
11	U15727001	Power Supply Harness Unit	1					
12	U05885001	Fuse Holder Unit (England only) (with 13)	1					
13	U15320000	Glass Fuse 0.63 AST	1					
16	U06159001	Cord Holder VDE (Germany)	1					
17	U06348001	Cord Switch Cover (Germany)	1					
18	037322015	Screw for Cord Switch	1					
19	028030243	Spring Washer for Cord Switch	1					
20	U06450001	Earth Terminal (Germany)	1					
21	502677001	Teeth Washer for Earth Terminal	1					
22	U06451001	Washer for Earth Terminal	1					
23	U06452001	Nut for Earth Terminal	2					
24	U06453001	Lug Wire Unit	1					

SPECIAL PARTS

ELECTRICAL STANDARD			(A) 100V	(B) 115V	(C) 127V	(D) 200V	(E) (Europe) Others) 220V	(F) (Germany) 220V	(G) (England) 240V	(H) 110V	(I) (Finland) 220V
SUB-REF. NO.	NAME	Q'TY	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
1	Cord Switch Unit	1	U05744001	←	←	U05823001	←	←	←	U05744001	U05823001
7	Transformer Unit	1	U15302001	U15304001	U16438001	U15461001	U15334001	←	U15335001	U15460001	U15334001
10	AC Wire Unit	1	U15371001	←	←	U15372001	←	U15374001	U15372001	U15371001	U15452001

ELECTRICAL STANDARD			(J) (Australia) 240V		
SUB-REF. NO.	NAME	Q'TY	CODE	CODE	CODE
1	Cord Switch Unit	1	U05823001		
7	Transformer Unit	1	U16451001		
10	AC Wire Unit	1	U15372001		

NAME COLOR & DESCRIPTION	Power Switch Lever			
	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.
Green (523) others		9A	U05750001	
Green (523) England only		9B	U06121001	

Caution: To visualize the  part and ordering procedures, please refer to the Preface.

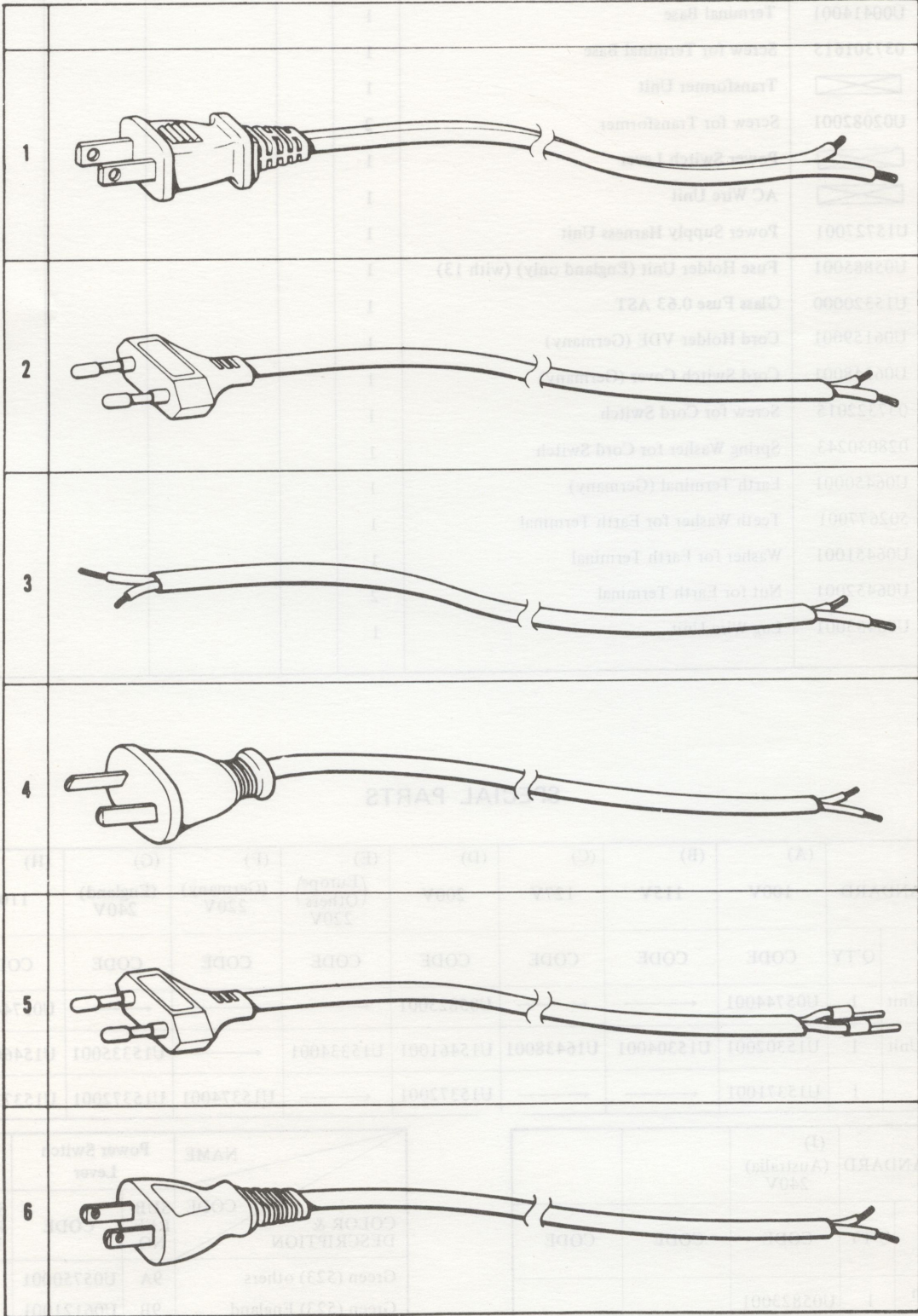
536-681-050

POWER SUPPLY CORD

Model: CE-58, CE-68

MAIN-
REF. NO.

SA-051



PARTS CODE & PARTS NAME

Model: CE-58, CE-68

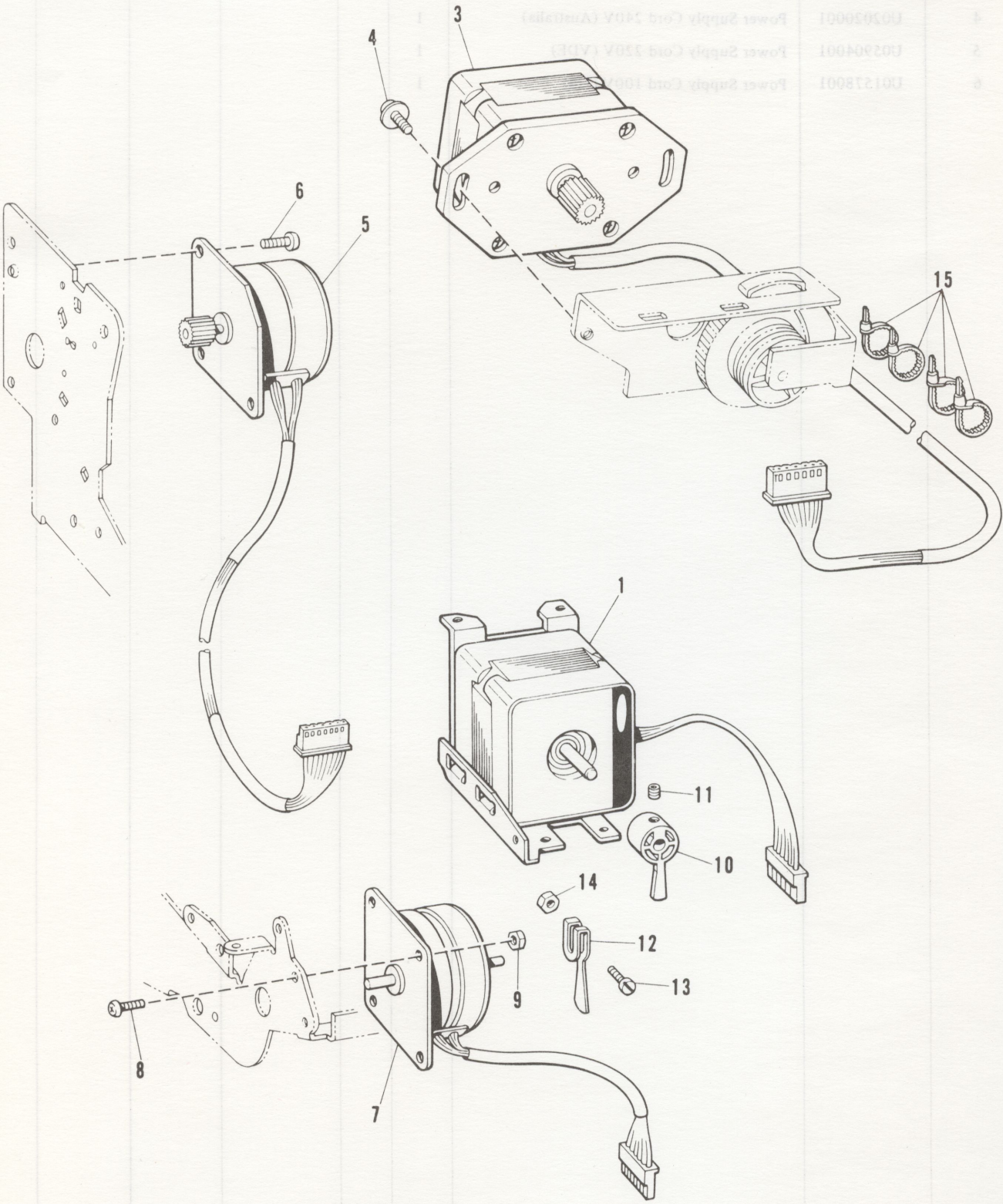
MAIN-REF. NO.	SA-051	Functional group name	POWER SUPPLY CORD					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U00416001	Power Supply Cord 115V (UL, CSA & Others)	1					
2	U00415001	Power Supply Cord 220V Europe (Others)	1					
3	U01436001	Power Supply Cord 240V (BS)	1					
4	U02020001	Power Supply Cord 240V (Australia)	1					
5	U05904001	Power Supply Cord 220V (VDE)	1					
6	U01578001	Power Supply Cord 100V (JIS)	1					

MOTOR

Model: CE-58, CE-68

MAIN-
REF. NO.

SF-054



PARTS CODE & PARTS NAME

Model: CE-58, CE-68

Model: CE-58, CE-68

MAIN-REF. NO.	SF-054	Functional group name	MOTOR							
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK		
						FROM	UP TO			
1	U15433001	Wheel Motor Unit	1							
3	U19130001	Head Operating Motor Unit	1							
4	571824001	Screw for Head Operating Motor	2							
5	U05697001	Line Feed Motor Unit	1							
6	002350606	Screw for Line Feed Motor	1							
7	U05701001	Ribbon Motor	1							
8	021300106	Screw for Ribbon Motor	1							
9	021300106	Nut for Ribbon Motor	1							
10	U05702001	PW Home Position Actuator	1							
11	525747001	Screw for PW Home Position Actuator	1							
12	U05703000	Ribbon Lift Home Position Actuator	1							
13	007260813	Screw for Ribbon Lift Home Position Actuator	1							
14	021260106	Nut for Ribbon Lift Home Position Actuator	1							
15	U00505001	Binder	4							

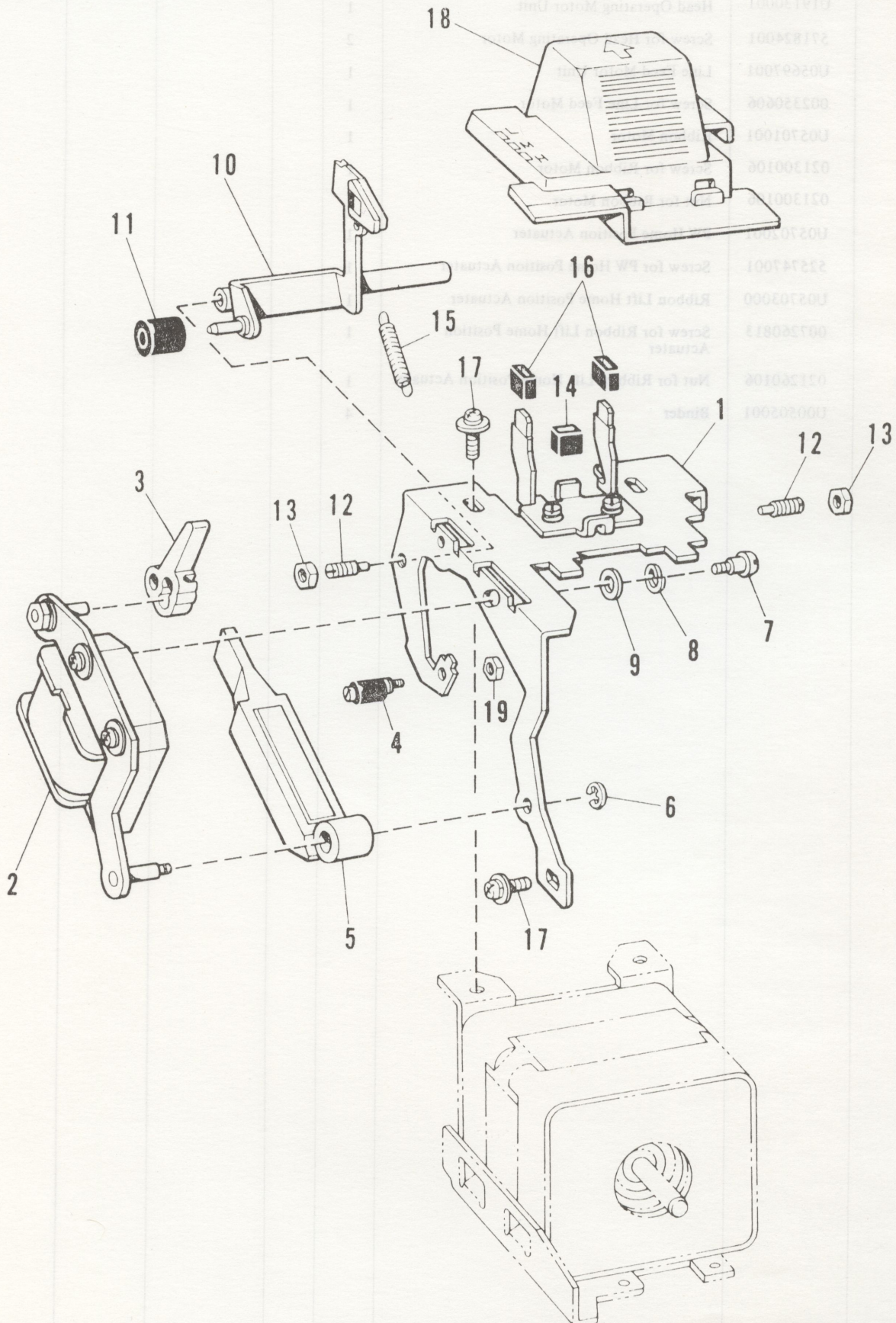
536-701-054

HAMMER MECHANISM

Model: CE-58, CE-68

**MAIN-
REF. NO.**

SA-055



PARTS CODE & PARTS NAME

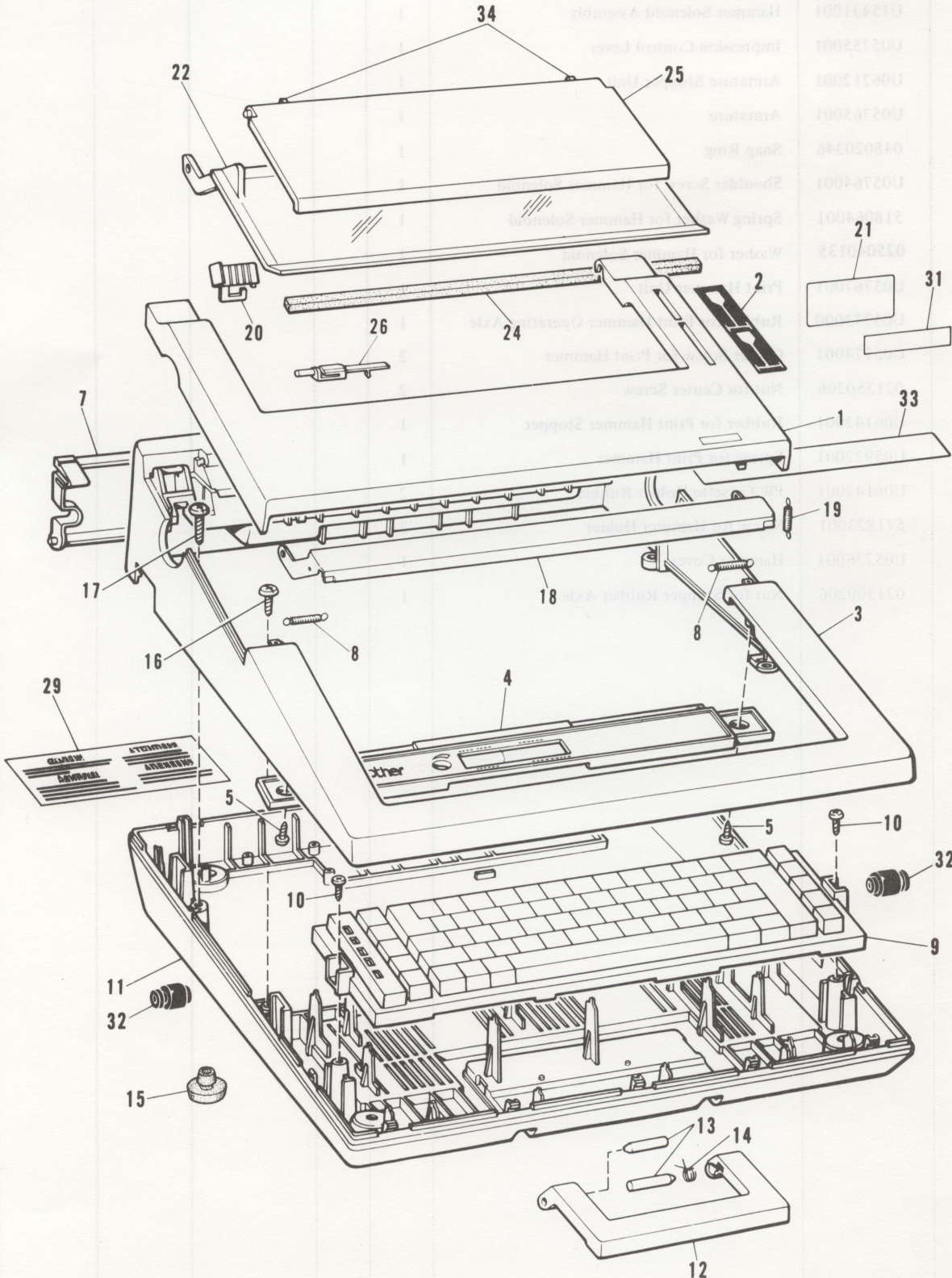
Model: CE-58, CE-68

MAIN- REF. NO.	SA-055	Functional group name	HAMMER MECHANISM					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
(1~16, 19)	U05751001	Hammer Holder Complete	1					
1	U15432001	Hammer Holder Assembly	1					
2	U15431001	Hammer Solenoid Assembly	1					
3	U05755001	Impression Control Lever	1					
4	U06212001	Armature Stopper Unit	1					
5	U05765001	Armature	1					
6	048020346	Snap Ring	1					
7	U05764001	Shoulder Screw for Hammer Solenoid	1					
8	518064001	Spring Washer for Hammer Solenoid	1					
9	025040135	Washer for Hammer Solenoid	1					
10	U05767001	Print Hammer Unit	1					
11	U05773000	Rubber for Print Hammer Operating Axle	1					
12	U05774001	Center Screw for Print Hammer	2					
13	021350206	Nut for Center Screw	2					
14	U06142001	Rubber for Print Hammer Stopper	1					
15	U05922001	Spring for Print Hammer	1					
16	U06142001	PW Cassette Holder Rubber	2					
17	571823001	Screw for Hammer Holder	3					
18	U05776001	Hammer Cover	1					
19	021300206	Nut for Stopper Rubber Axle	1					

MAIN COVER & NAME PLATE

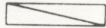
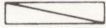
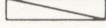
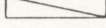
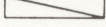
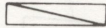
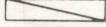
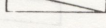
Model: CE-58

MAIN- REF. NO.	SH-061
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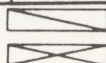


PARTS CODE & PARTS NAME

Model: CE-58

MAIN-REF. NO.	SH-061-(1)	Functional group name	MAIN COVER & NAME PLATE					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Top Cover Unit (with 2)	1					
2	U08145001	Cover Blind	1					
(3 ~ 8)		Upper Cover Unit	1					
3		Upper Cover	1					
4		LCD Cover 58	1					
5	U05783001	Tapping Screw for LCD Cover	2					
7		Power Supply Compartment Cover	1					
8	U02150001	Spring	2					
9	U07463001	Keyboard Panel	1					
10	U02082001	Tapping Screw for Keyboard Panel	2					
(11 ~ 15)		Lower Cover Unit (with 32)	1					
11		Lower Cover	1					
12		Handle	1					
13	U05810001	Handle Axle	2					
14	U05811001	Handle Return Spring	1					
15	U05788001	Rubber Foot	2					
16	U05789001	Tapping Screw for Upper Cover (Front)	2					
17	U05790001	Tapping Screw for Upper Cover (Rear)	2					
18	U05660001	Paper Rest 13	1					
19	513924001	Spring for Paper Rest	1					
20	U05672002	Paper Guide	1					
21		Rating Plate	1					
(22 ~ 25)	U06132001	Acoustic Cover Assembly	1					
22	U05831001	Acoustic Cover Unit (with 23, 34)	1					
24	U05833001	Sound Absorber B	1					
25	U05803001	Blinder (with 34)	1					
26	U05806002	Acoustic Cover Mount Axle	2					
29	575329001	Caution Label	1					
31	U01810001	FCC Label (U.S.A. only)	1					
32	U05689001	Chassis Mount Rubber	2					
33	U06397001	Attention Label	1					
34	U05805001	Ratchet	2					

Caution: To visualize the



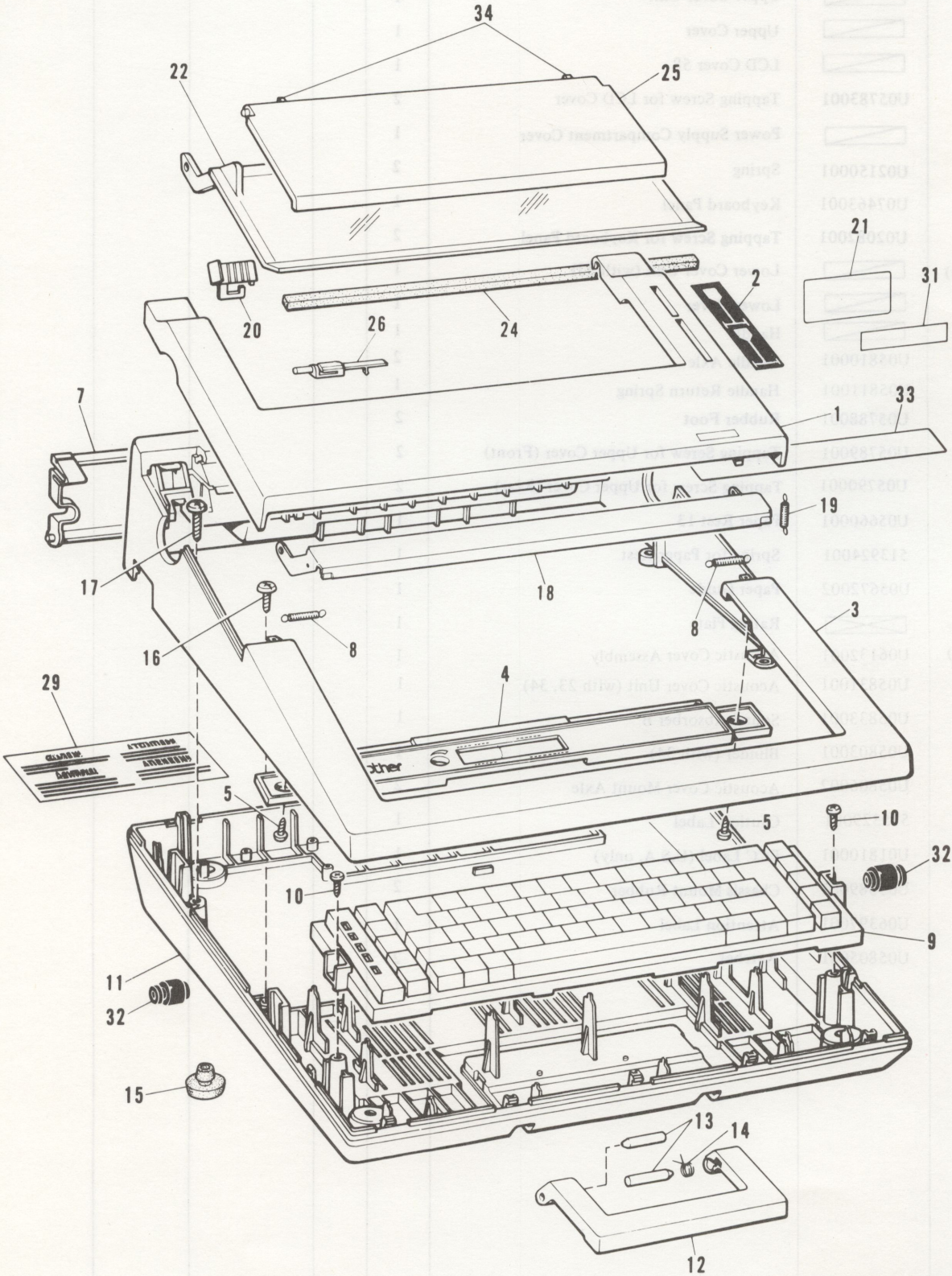
part and ordering procedures, please refer to the Preface.

536-581-061

MAIN COVER & NAME PLATE

Model: CE-58

MAIN- REF. NO.	SH-061
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PARTS CODE & PARTS NAME

Model: CE-58

MAIN- REF. NO.	SH-061-(2)	Functional group name	MAIN COVER & NAME PLATE
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SPECIAL PARTS

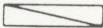
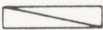
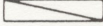
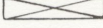
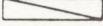
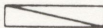
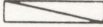
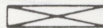
NAME COLOR & DESCRIPTION	Top Cover				Upper Cover Unit				Upper Cover		LCD Cover 58	
	COMPACTRONICS8				brother						brother	
	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE
Cream (364)	1A	U06732001			(3~8)A	U07730001			3A	U05781001	4A	U06728001

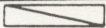
NAME COLOR & DESCRIPTION	Power Supply Compartment Cover				Lower Cover Unit (with 32)		Lower Cover		Handle			
	brother											
	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE
Cream (364)	7A	U07731001			(11~15)A	U05807001	11A	U05808001	12A	U05809001		

Name COLOR & DESCRIPTION	Rating Plate											
	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE	SUB- REF. NO.	CODE
B CE-58 110~120V 60Hz	21A	U06734001										
B CE-58 UL	21B	U06735001										
B CE-58 CSA	21C	U06736001										

PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.		SI-061-(1)	Functional group name	MAIN COVER & NAME PLATE					PRODUCTION		REMARK
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	FROM	UP TO				
1		Top Cover Unit (with 2)	1								
2	U08145001	Cover Blind	1								
(3 ~ 8)		Upper Cover Unit	1								
3		Upper Cover	1								
4		LCD Cover 68	1								
5	U05783001	Taping Screw for LCD Cover	2								
7		Power Supply Compartment Cover	1								
8	U02150001	Spring	2								
9	U07463001	Keyboard Panel	1								
10	U02082001	Tapping Screw for Keyboard Panel	2								
(11, 15)		Lower Cover Unit (with 35)	1								
11		Lower Cover	1								
15	U05788001	Rubber Foot	2								
16	U05789001	Tapping Screw for Upper Cover (Front)	2								
17	U05790001	Tapping Screw for Upper Cover (Rear)	2								
18	U05660001	Paper Rest 13	1								
19	513924001	Spring for Paper Rest	1								
20	U05672002	Paper Guide	1								
21		Rating Plate	1								
(22 ~ 25)	U06132001	Acoustic Cover Assembly	1								
22	U05831001	Acoustic Cover Unit (with 24, 37)	1								
24	U05833001	Sound Absorber B	1								
25	U05803001	Blinder (with 37)	1								
26	U05806002	Acoustic Cover Mount Axle	2								
29	575329001	Caution Label	1								
30	U05900001	Fuse Indicator (TO. 63A) (BS only)	1								
31	U01810001	FCC Label (U. S. A. only)	1								
32	U05914001	Paper Supporter	1								
33	U05915001	Indicator	1								
34	U05925001	Spring for Indicator	1								
35	U05689001	Chassis Mount Rubber	2								
36	U06397001	Attention Label	1								
37	U05805001	Ratchet	2								

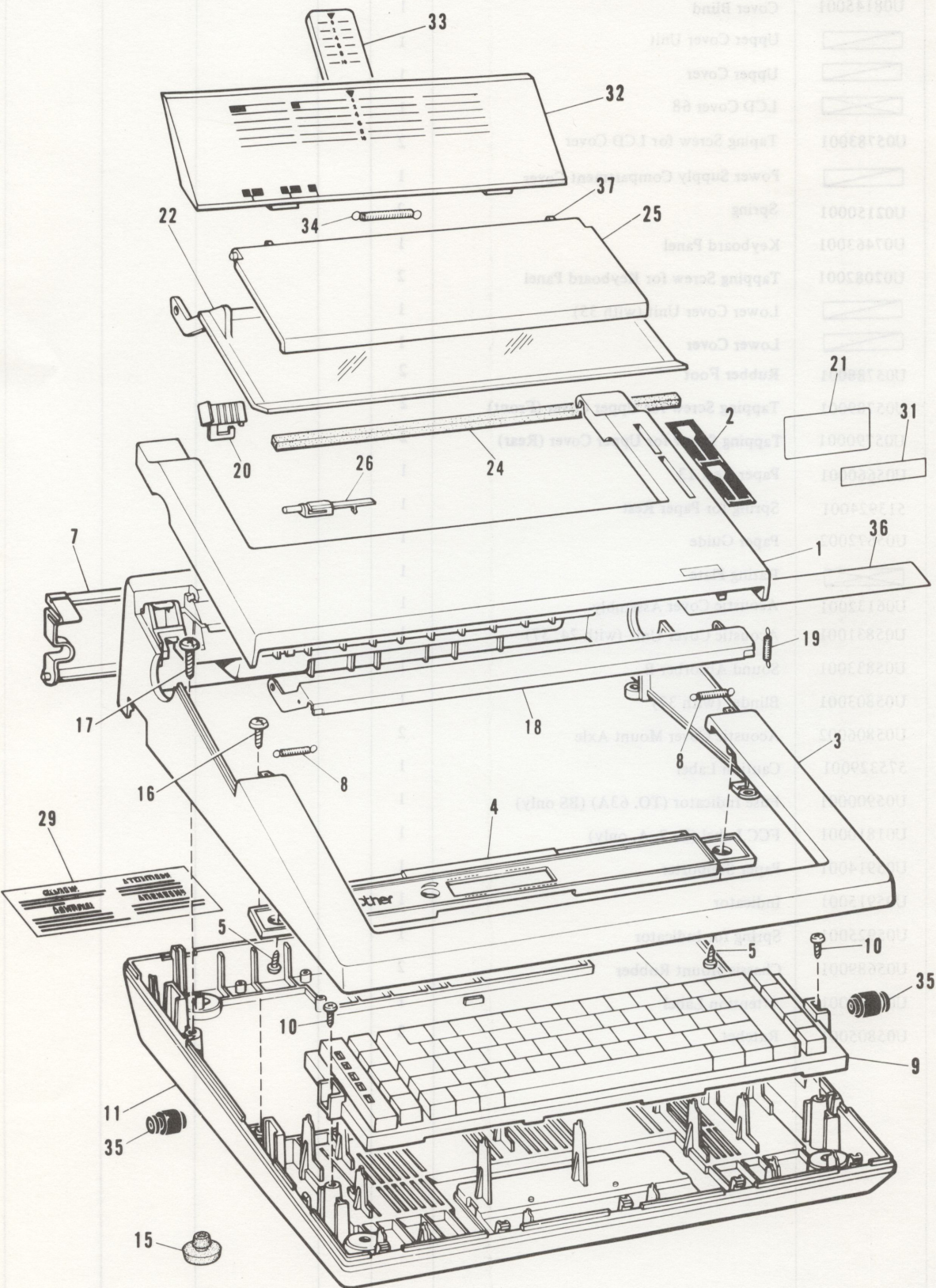
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-681-061

MAIN COVER & NAME PLATE

Model: CE-68

MAIN-REF. NO.	SI-061
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PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.	SI-061-(2)	Functional group name	MAIN COVER & NAME PLATE
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SPECIAL PARTS

NAME COLOR & DESCRIPTION	Top Cover				Upper Cover Unit				Upper Cover		LCD Cover 68	
	EXECTRON 68				brother						brother	
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Cream (364) Black (010)	1A	U06725001	1A	U06123001	(3~8)A	U07466002			3A	U05781002	4A	U07467001

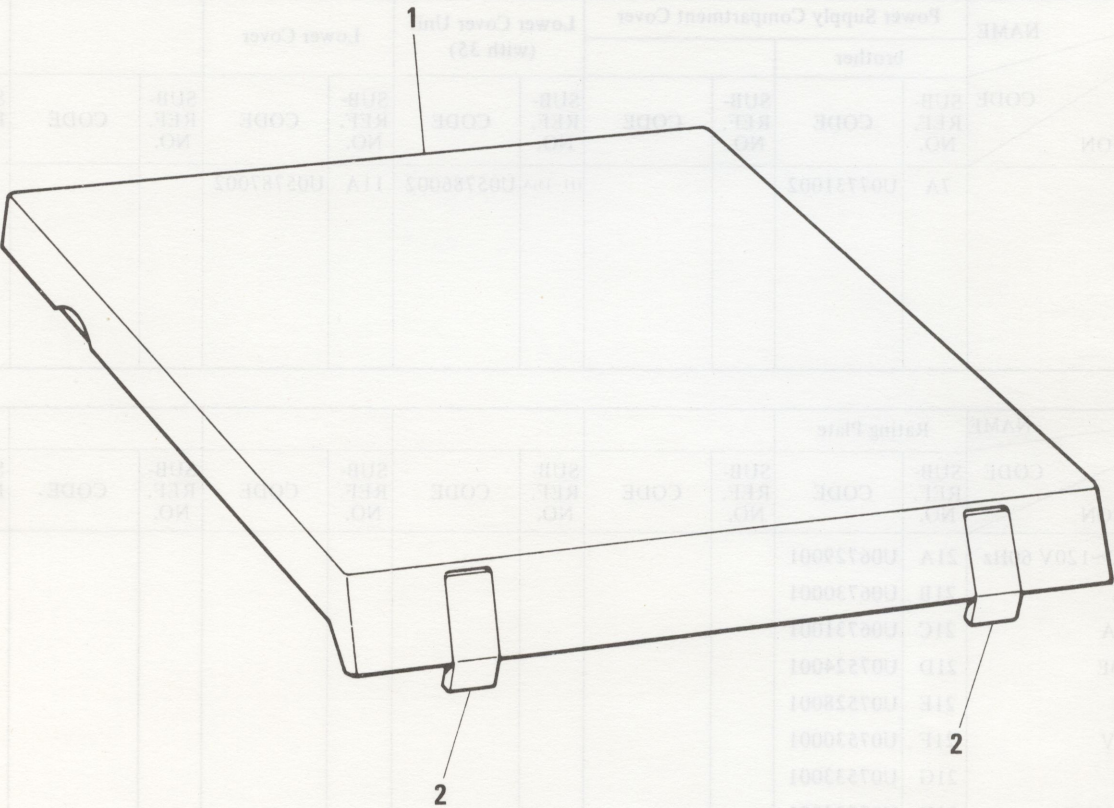
NAME COLOR & DESCRIPTION	Power Supply Compartment Cover				Lower Cover Unit (with 35)		Lower Cover					
	brother											
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
Black (010)	7A	U07731002			(11~15)A	U05786002	11A	U05787002				

NAME COLOR & DESCRIPTION	Rating Plate											
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
B CE-68 110~120V 60Hz	21A	U06729001										
B CE-68 UL	21B	U06730001										
B CE-68 CSA	21C	U06731001										
B CE-68 VDE	21D	U07524001										
B CE-68 BS	21E	U07528001										
B CE-68 SEV	21F	U07530001										
B CE-68 (f)	21G	U07533001										
B CE-68 NEMKO	21H	U07534001										
D CE-68 220V 50Hz	21I	U07535001										
B CE-68 240V 50Hz	21J	U07536001										
B CE-68 FEMKO	21K	U07537001										
B CE-68 220V 50Hz (France)	21L	U07539001										
B CE-68 110V 60Hz	21M	U07540001										
B CE-68 200V 50Hz	21N	U07541001										
B CE-68 110~120V 50/60Hz	21O	U07542001										
B CE-68 220~230V	21P	U07544001										

CASE

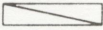
Model: CE-58

MAIN-REF. NO.	SA-062
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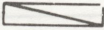
PARTS CODE & PARTS NAME

Model: CE-58

MAIN-REF. NO.	SA-062	Functional group name	CASE										
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK					
						FROM	UP TO						
1		Lid Case Unit (with 2)	1										
2		Lid Case Lock Pawl	2										

SPCEIAL PARTS

NAME COLOR & DESCRIPTION	Lid Case Unit (with 2)		Lid Case Lock Pawl									
	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.
Cream (364)		1A	U05842001	1A	U06978003							
Black (010)		1B	U05842002	1B	U06978001							

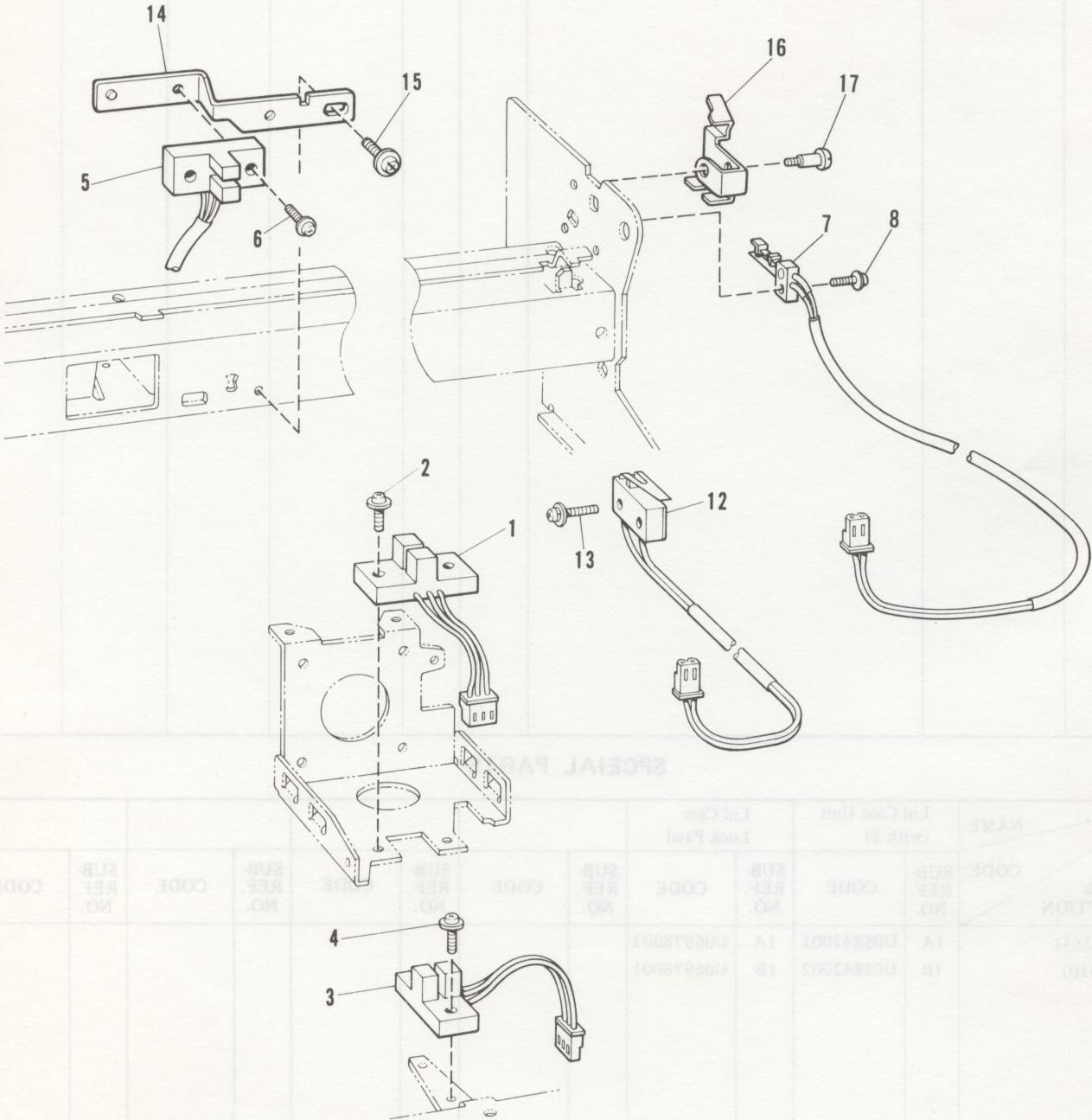
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-601-062

DETECTOR

Model: CE-58, CE-68

MAIN- REF. NO.	SF-100
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PARTS CODE & PARTS NAME

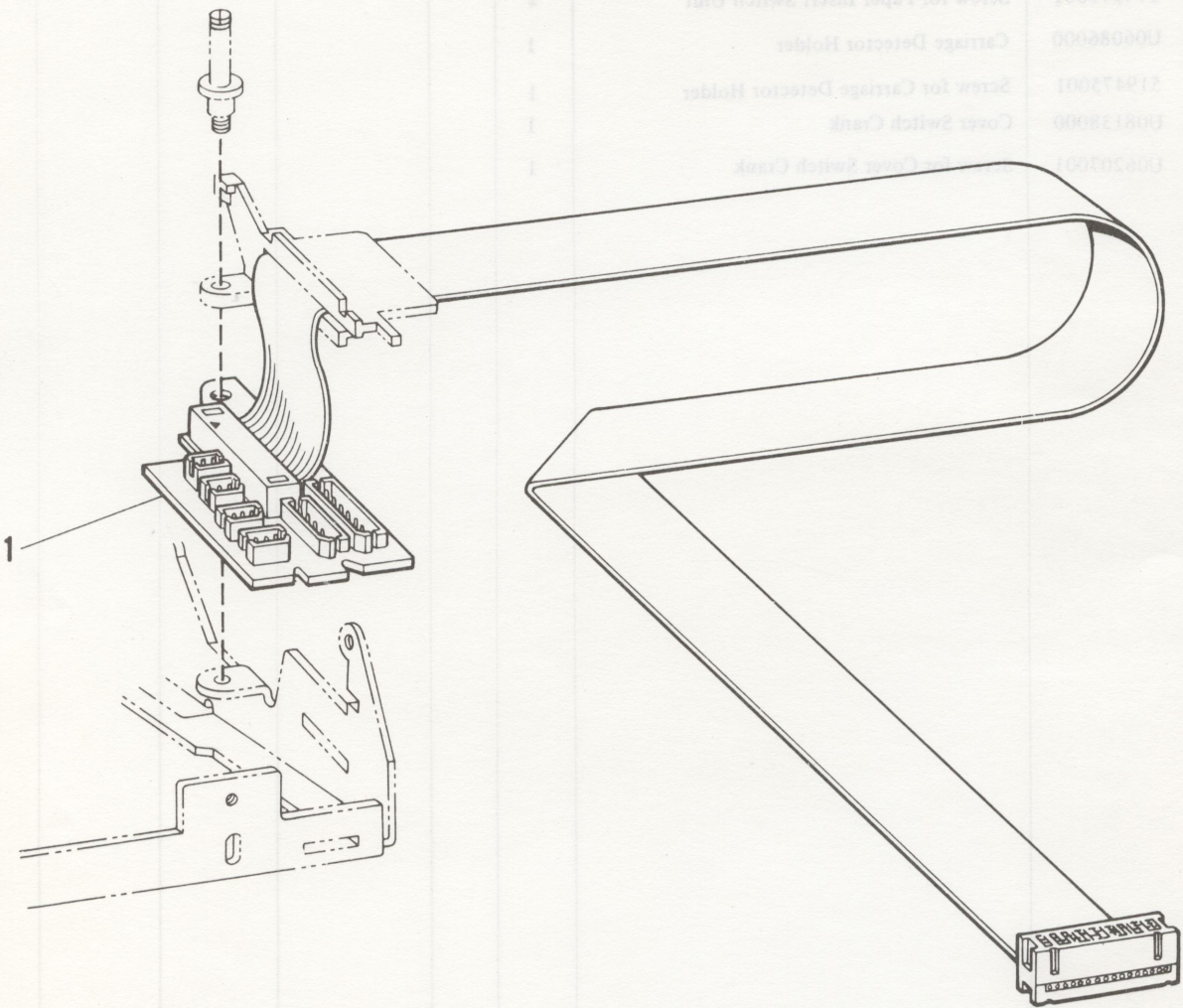
Model: CE-58, CE-68

MAIN- REF. NO.	SF-100	Functional group name	DETECTOR					
SUB- REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U15294001	Index Detector	1					
2	573336001	Screw for Index Detector	2					
3	U15363001	Ribbon Detector	1					
4	573336001	Screw for Ribbon Detector	2					
5	U16004001	Carriage Detector Unit	1					
6	002300706	Screw for Detector Unit	1					
7	U08140001	Cover Switch Unit	1					
8	U07149001	Screw for Cover Switch	1					
12	U15383001	Paper Insert Switch Unit	1					
13	574349001	Screw for Paper Insert Switch Unit	2					
14	U06086000	Carriage Detector Holder	1					
15	519475001	Screw for Carriage Detector Holder	1					
16	U08138000	Cover Switch Crank	1					
17	U06207001	Screw for Cover Switch Crank	1					

RELAY CIRCUIT BOARD

Model: CE-58, CE-68

MAIN- REF. NO.	SE-101
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REF. NO.	SYB. NO.	CODE	NAME	QTY	CP	NEW CODE	FUNCTIONAL GROUP NAME	DETECTOR
1		U12345001	Index Detector	1				
2		U12345001	Screw for Index Detector	2				
3		U12345001	Ribbon Detector	1				
4		U12345001	Screw for Ribbon Detector	2				
5		U12345001	Carriage Detector Unit	1				
6		U02345001	Screw for Detector Unit	1				
7		U08140001	Cover Switch Unit	1				
8		U07140001	Screw for Cover Switch	1				
12		U12345001	Paper Insert Switch Unit	1				
13		U14345001	Screw for Paper Insert Switch Unit	2				
14		U0086000	Carriage Detector Holder	1				
15		U19475001	Screw for Carriage Detector Holder	1				
16		U08138000	Cover Switch Crank	1				
17		U06302001	Screw for Cover Switch Crank	1				

PARTS CODE & PARTS NAME

Model: CE-58, CE-68

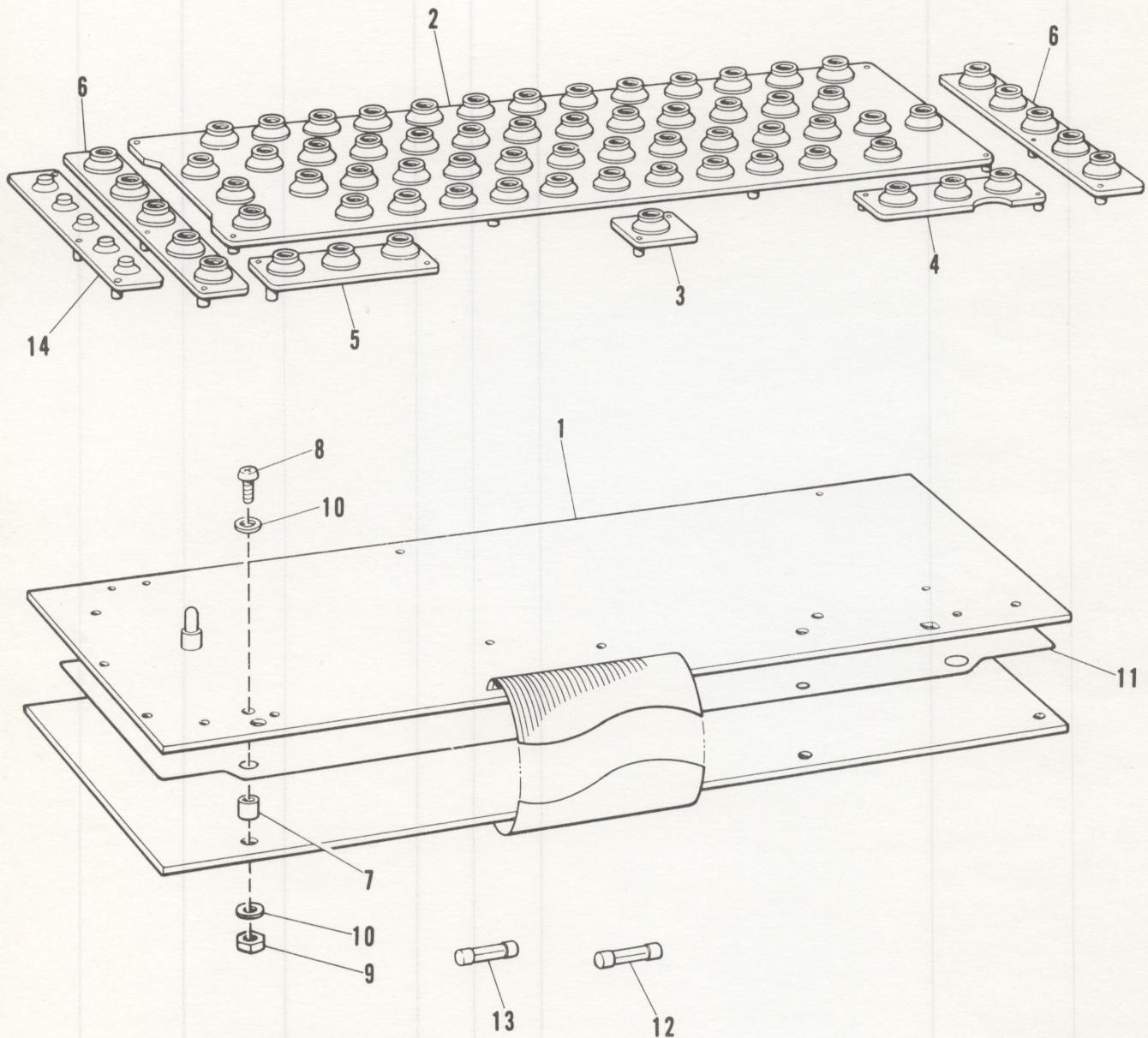
MAIN-REF. NO.	SE-101	Functional group name	RELAY CIRCUIT BOARD							
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK		
						FROM	UP TO			
1	U15490001	Relay Circuit Board Assembly	1							

LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD

Model: CE-58

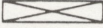
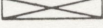
MAIN-
REF. NO.

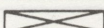
SH-102



PARTS CODE & PARTS NAME

Model: CE-58

MAIN-REF. NO.	SH-102-(1)	Functional group name	LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1~14		Logic Control with Keyboard Circuit Board Assembly	1					
1	U18405001	Keyboard Circuit Board Assembly CE-58/68	1					
2	U05794000	Contact Plate 46K	1					
3	U00867000	Contact Plate 1K	1					
4	U05795000	Contact Plate 3K (Right)	1					
5	U05903000	Contact Plate 3K (Left)	1					
6	U05796000	Contact Plate 5K	2					
7	U05798000	CIRCUIT BOARD Spacer	2					
8	002301205	Screw for Spacer	2					
9	021300106	Nut for Screw	2					
10	026030136	Washer for Screw	4					
11	U15736001	Insulator	1					
12		Gluss Fuse	1					
13		Gluss Fuse	1					
14	U06081000	Rubber Spring	1					

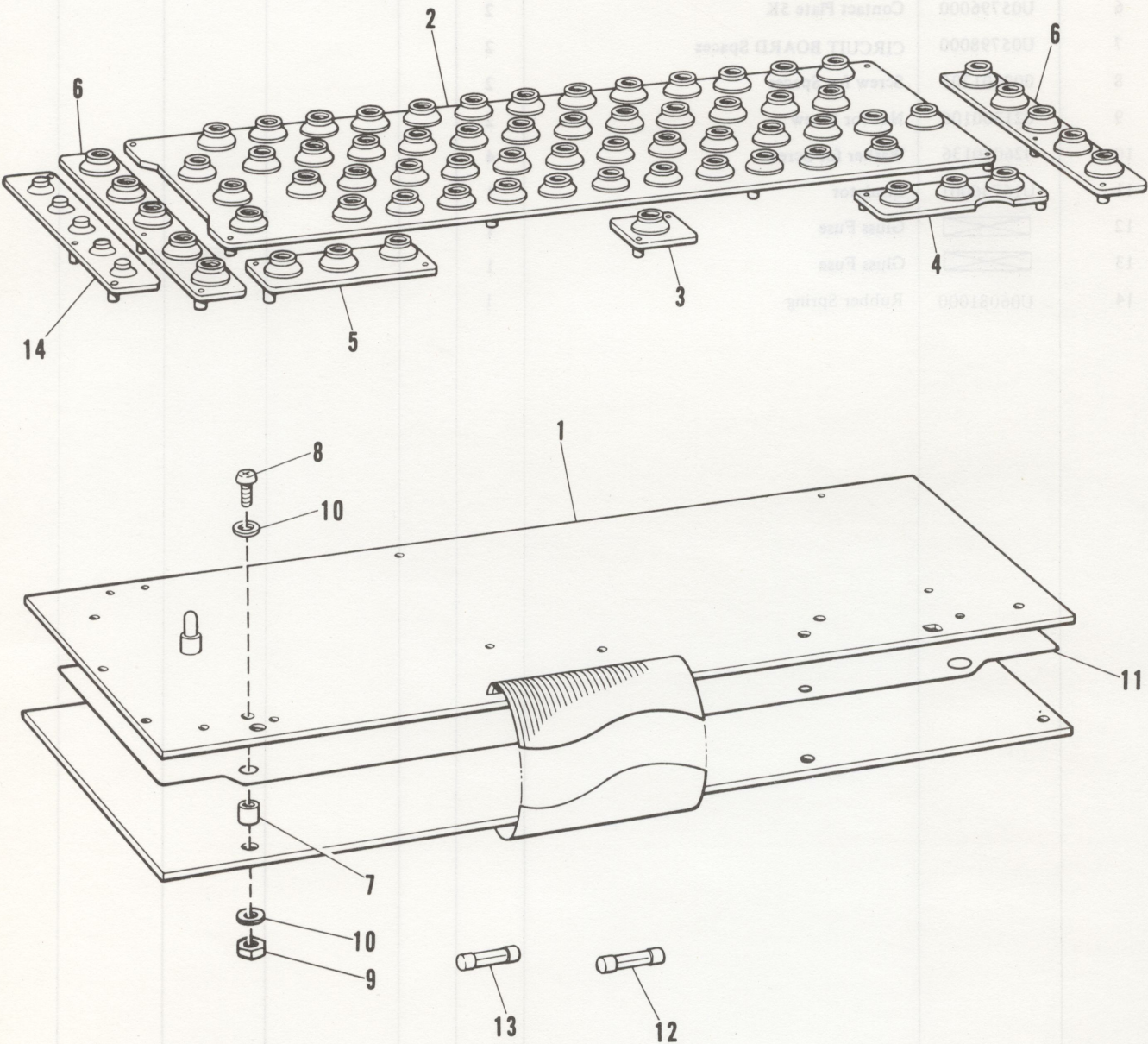
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-581-102

LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD

Model: CE-58

MAIN-REF. NO.	SH-102
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PARTS CODE & PARTS NAME

Model: CE-58

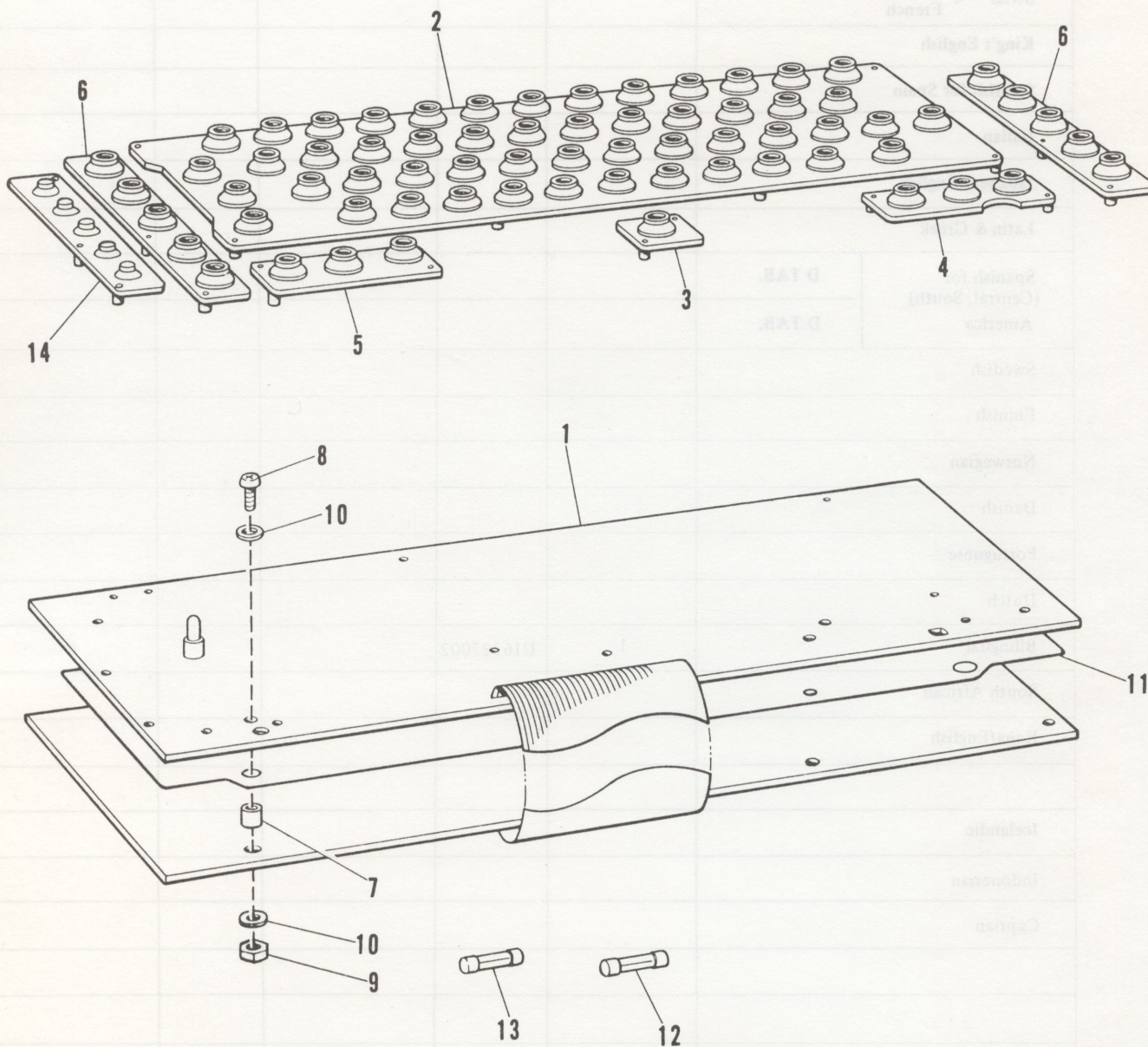
MAIN-REF. NO.	SH-102-(2)	Functional Group Name	LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD			
ELECTRICAL STANDARD						
SUB-REF.NO.	Name		Q'TY	CODE	(C/P) NEW CORD PRODUCTION	
1	Americal English		1	U16327001		
	German					
	French					
	Swiss < German French					
	King's English					
	Spanish for Spain					
	Italian					
	Japanese English					
	Latin & Greek					
	Spanish for (Central, South) America	D TAB.				
		D TAB,				
	Swedish					
	Finnish					
	Norwegian					
	Danish					
	Portuguese					
	Dutch					
	Bilingual		1	U16327002		
	South African					
	Kana/English					
	Icelandic					
	Indonesian					
	Cyprian					
12	Fuse 2A		1	U15083000		
13	Fuse 0.3A		1	U15322000		

LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD

Model: CE-68

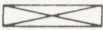
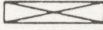
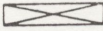
MAIN-
REF. NO.

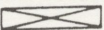
SI-102



PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.	SI-102-(1)	Functional group name	LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1~14		Logic Control with Keyboard Circuit Board Assembly	1					
1	U18405001	Keyboard Circuit Board Assembly CE-58/68	1					
2	U05794000	Contact Plate 46K	1					
3	U00867000	Contact Plate 1K	1					
4	U05795000	Contact Plate 3K (Right)	1					
5	U05903000	Contact Plate 3K (Left)	1					
6	U05796000	Contact Plate 5K	2					
7	U05798000	CIRCUIT BOARD Spacer	2					
8	002301205	Screw for Spacer	2					
9	021300106	Nut for Screw	2					
10	026030136	Washer for Screw	4					
11	U15736001	Insulator	1					
12		Glass Fuse	1					
13		Glass Fuse	1					
14	U06081000	Rubber Spring	1					

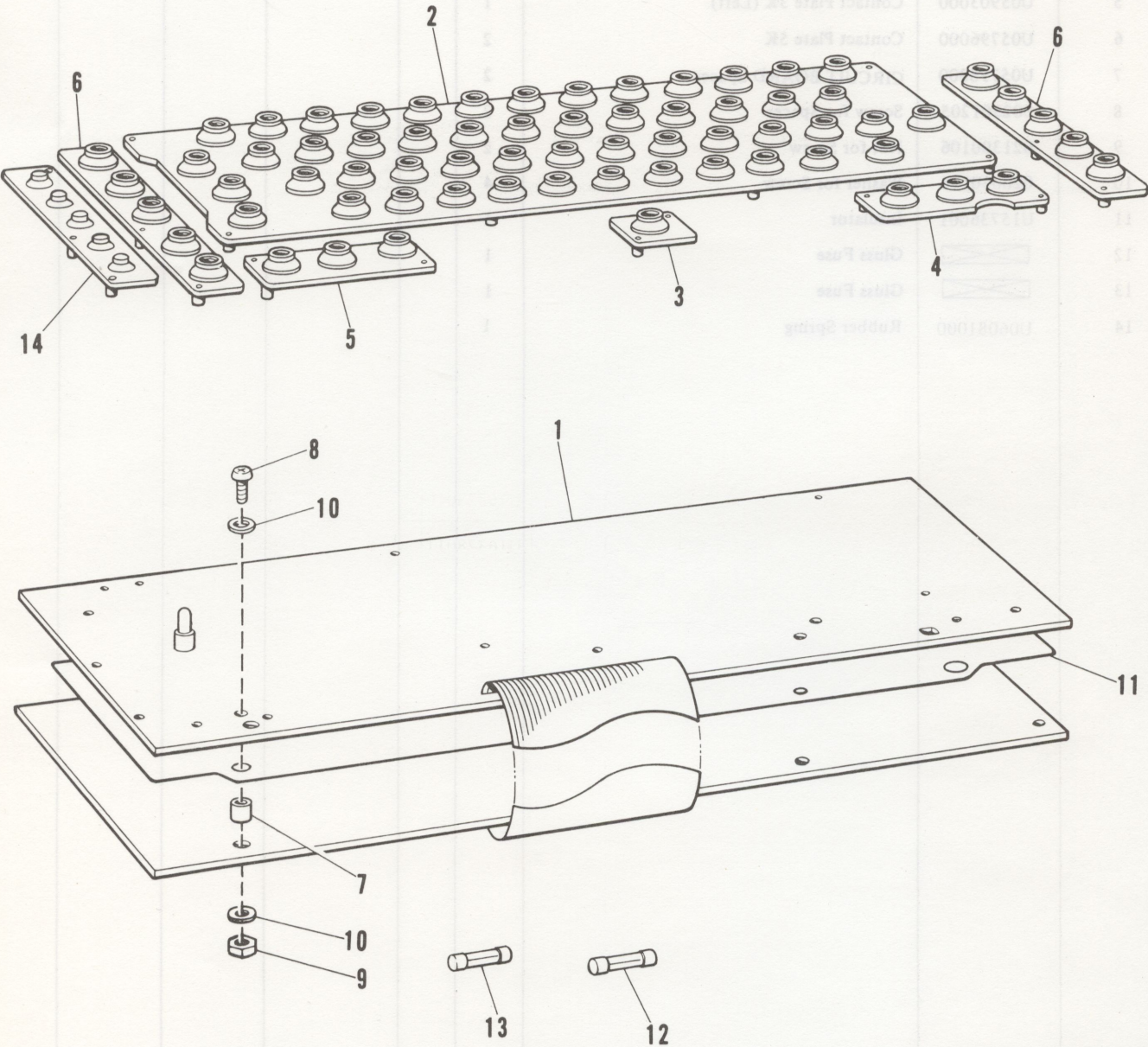
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-681-102

LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD

Model: CE-68

MAIN- REF. NO.	SI-102
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PARTS CODE & PARTS NAME

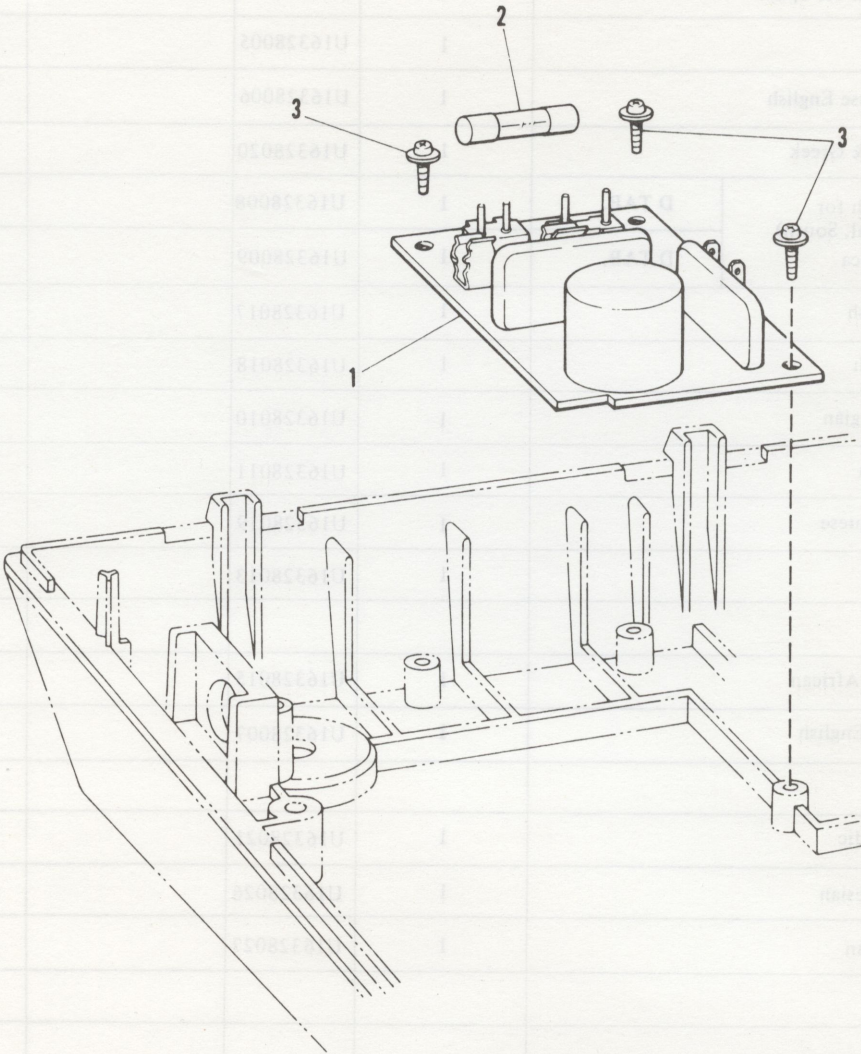
Model: CE-68

MAIN-REF. NO.		SI-102-(2)	Functional Group Name	LOGIC CONTROL WITH KEYBOARD CIRCUIT BOARD		
ELECTRICAL STANDARD						
SUB-REF.NO.	Name		Q'TY	CODE	(C/P) NEW CORD PRODUCTION	
1	Americal English		1	U16328001		
	German		1	U16328004		
	French		1	U16328012		
	Swiss < German French		1	U16328016		
	King's English		1	U16328003		
	Spanish for Spain		1	U16328014		
	Italian		1	U16328005		
	Japanese English		1	U16328006		
	Latin & Greek		1	U16328020		
	Spanish for (Central, South) America	D TAB.	1	U16328008		
		D TAB.	1	U16328009		
	Swedish		1	U16328017		
	Finnish		1	U16328018		
	Norwegian		1	U16328010		
	Danish		1	U16328011		
	Portuguese		1	U16328019		
	Dutch		1	U16328013		
	Sóuth African		1	U16328015		
	Kana/English		1	U16328007		
	Icelandic		1	U16328021		
	Indonesian		1	U16328026		
	Cyprian		1	U16328027		
					</	

FILTER CIRCUIT BOARD

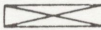
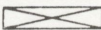
Model: CE-58, CE-68

MAIN- REF. NO.	SA-103
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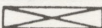
PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SA-103	Functional group name	FILTER CIRCUIT BOARD					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Filter Circuit Board Assembly (with 2)	1					
2		Glass Fuse	1					
3	U02083001	Tapping Screw for Circuit Board	3					

SPECIAL PARTS

ELECTRICAL STANDARD			(A) 100V	(B) 110~120V	(C) 200~240V	(D) 240V (BS) (England)	(E) 220V (Finland)	(F) 127V		
SUB-REF. NO.	NAME	Q'TY	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
1	Filter Circuit Board Assembly	1	U15308001	U15310001	U15311001	U15312001	U15451001	U16438001		
2	Glass Fuse	1	U15329000	U15323000	U15320000		U15450000	U15323000		
		1								
		1								
		1								
		1								
		1								
		1								
		1								
		1								
		1								
		1								
		1								
		1								

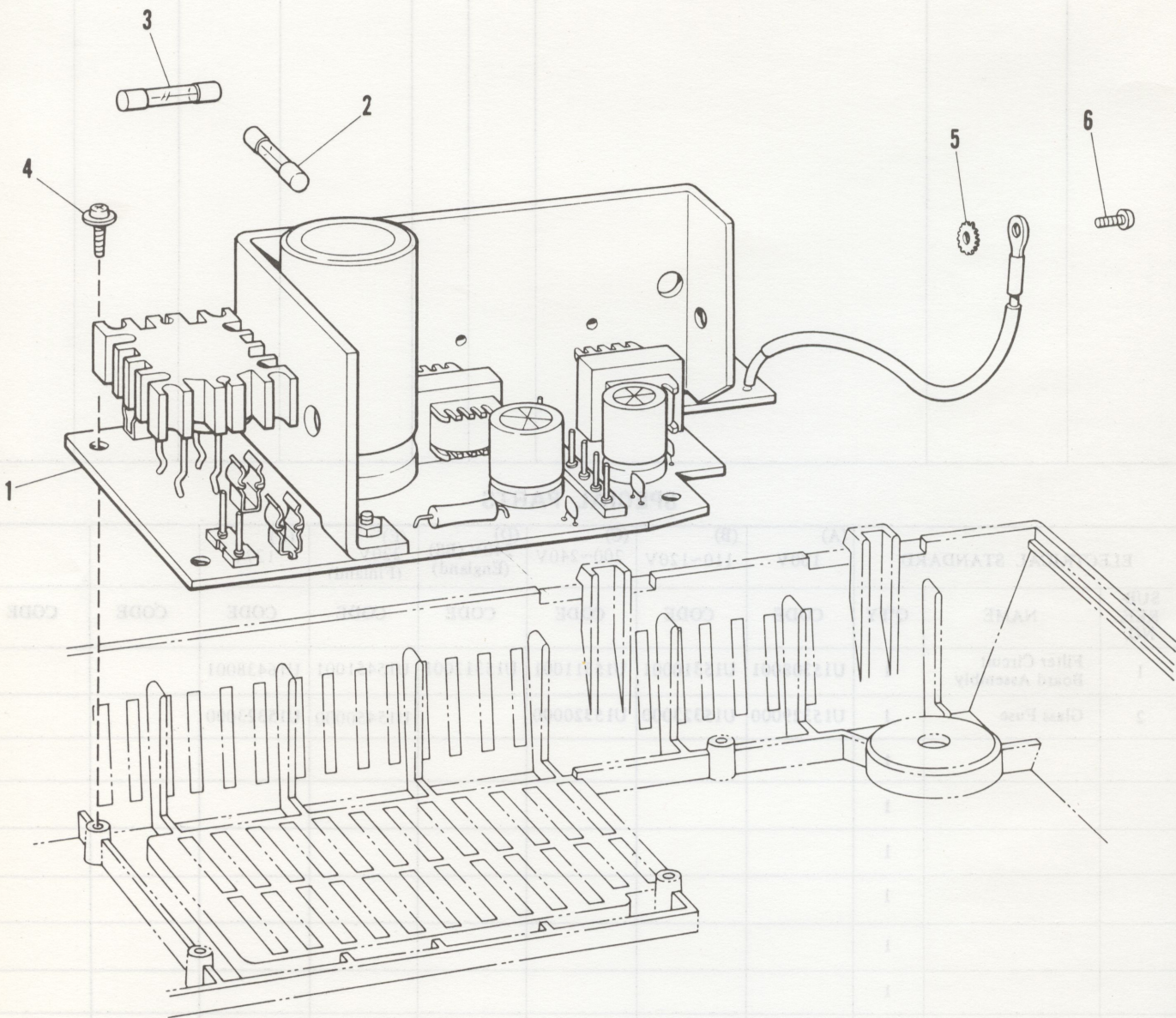
Caution:  To visualize the part and ordering procedures, please refer to the Preface.

536-601-103

POWER SUPPLY CIRCUIT BOARD

Model: CE-58, CE-68

MAIN- REF. NO.	SF-104
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PARTS CODE & PARTS NAME

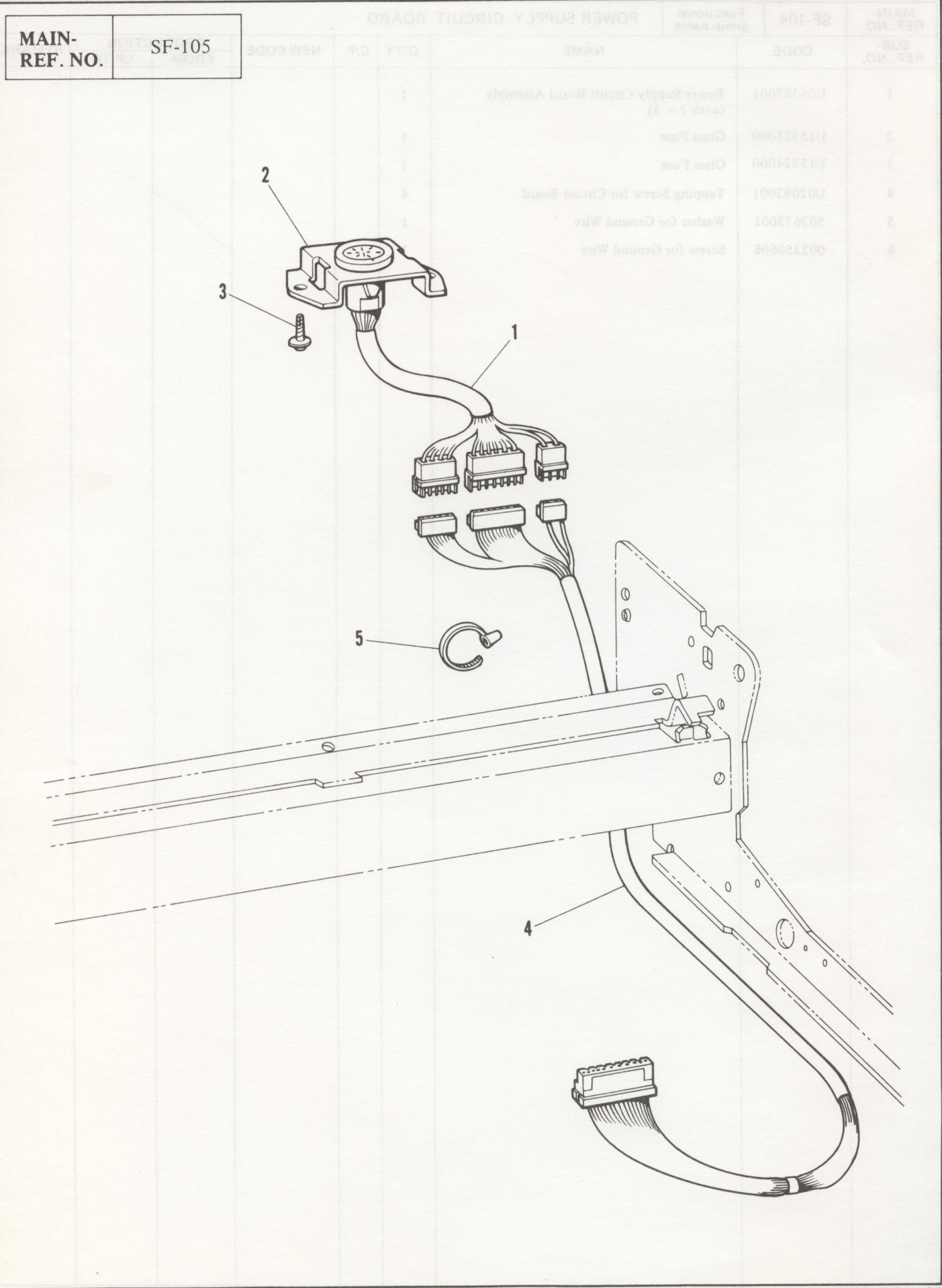
Model: CE-58, CE-68

Model: CE-56, CE-66

MAIN-REF. NO.	SF-104	Functional group name	POWER SUPPLY CIRCUIT BOARD					PRODUCTION		REMARK
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	FROM	UP TO			
1	U06387001	Power Supply Circuit Board Assembly (with 2 ~ 3)	1							
2	U15325000	Glass Fuse	1							
3	U15324000	Glass Fuse	1							
4	U02083001	Tapping Screw for Circuit Board	4							
5	502673001	Washer for Ground Wire	1							
6	002350606	Screw for Ground Wire	1							

INTERFACE CONNECTOR

Model: CE-58, CE-68



PARTS CODE & PARTS NAME

Model: CE-58, CE-68

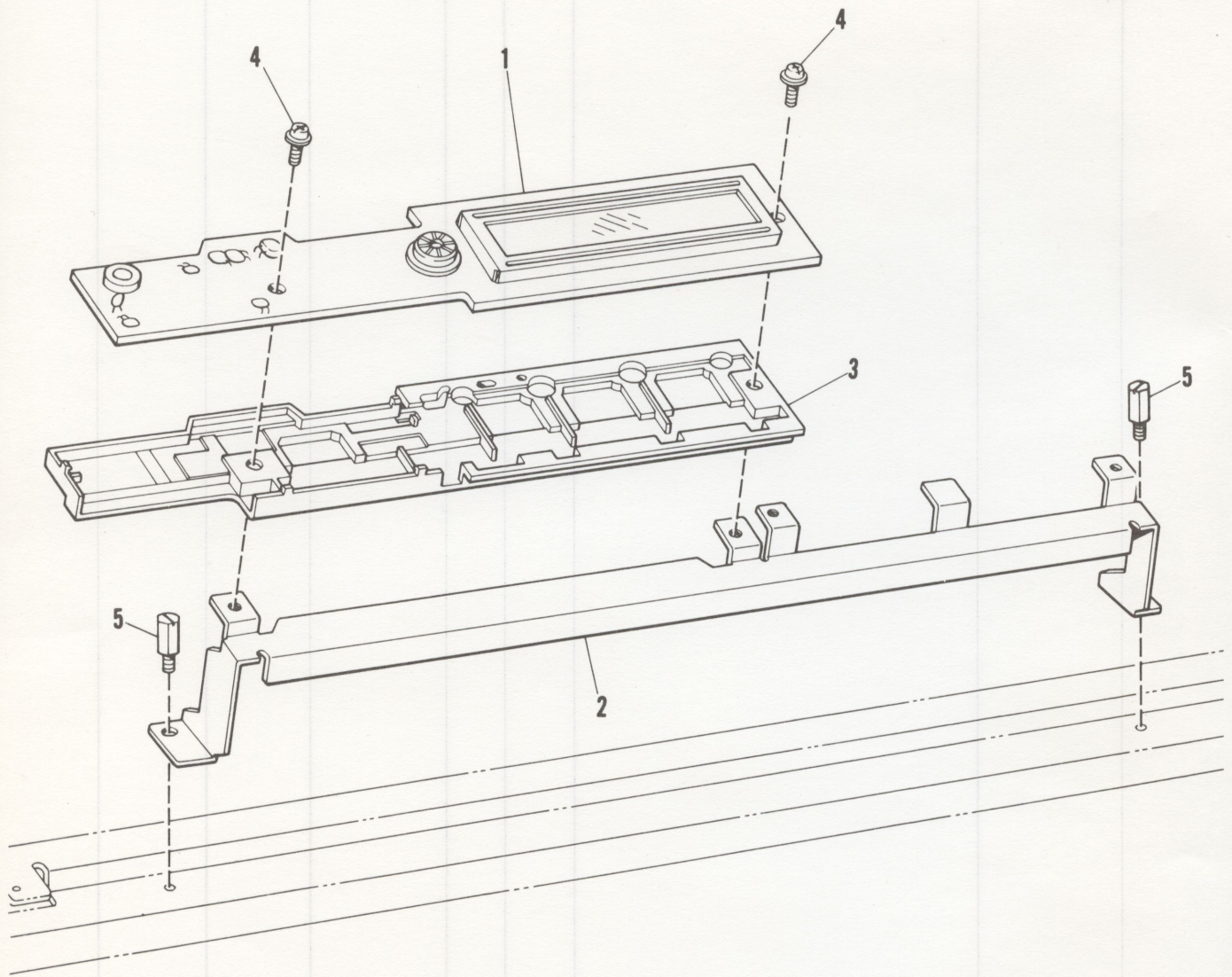
MAIN-REF. NO.	SF-105	Functional group name	INTERFACE CONNECTOR					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U16002001	Interface Connector Unit	1					
2	U05847000	Interface Connector Holder	1					
3	U02083001	Screw for Interface Connector Holder	2					
4	U16003001	Interface Harness Unit	1					
5	U00505001	Uni Tie Band	1					

LCD CIRCUIT BOARD

Model: CE-58, CE-68

MAIN-REF. NO.	SF-108
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MAIN REF. NO.	SUB. REF. NO.	CODE	NAME	QTY	CP	NEW CODE	FUNCTIONAL GROUP NAME
1	U15003001		Interface Connector Unit	1			INTERFACE CONNECTOR
2	U03847000		Interface Connector Holder	1			
3	U03083001		Screw for Interface Connector Holder	3			
4	U15003001		Interface Harness Unit	1			
5	U00202001		Unit Tie Band	1			

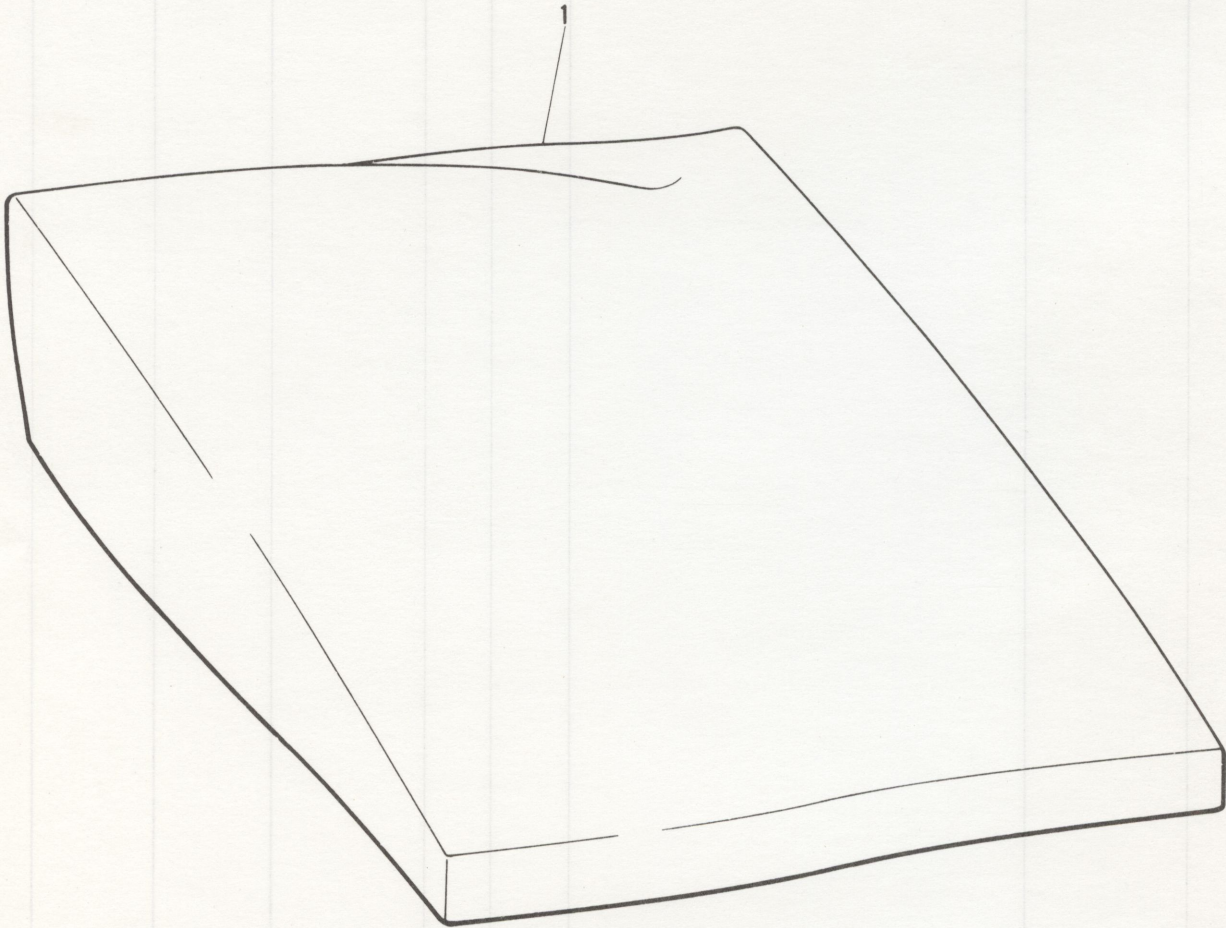


ACCESSORIES

Model: CE-68

Model: CE-58, CE-68

MAIN- REF. NO.	SB-910	NEW CODE	QTY	C/P	NAME	CODE	MAIN- REF. NO.	SUB- REF. NO.
			1		LCD Circuit Board Assembly	U06388001	1	
			1		Touch Panel Mount Plate	U06073000	2	
			1		LCD Circuit Board Protector	U06074001	3	
			2		Screw for LCD Touch Panel	U06489001	4	
			2		Screw for LCD Touch Panel	U06239001	5	



PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.	SB-910	Functional group name	ACCESSORIES					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1	U05917001	Dust Cover	1					

PRINTED MATTER

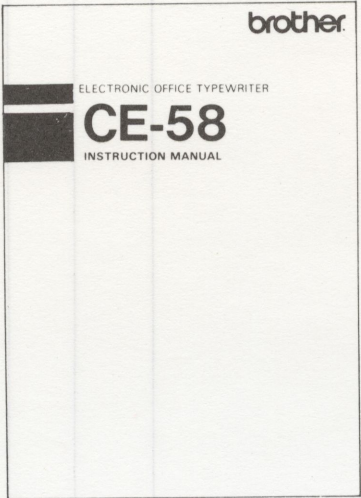
Model: CE-58

Model: CE-58

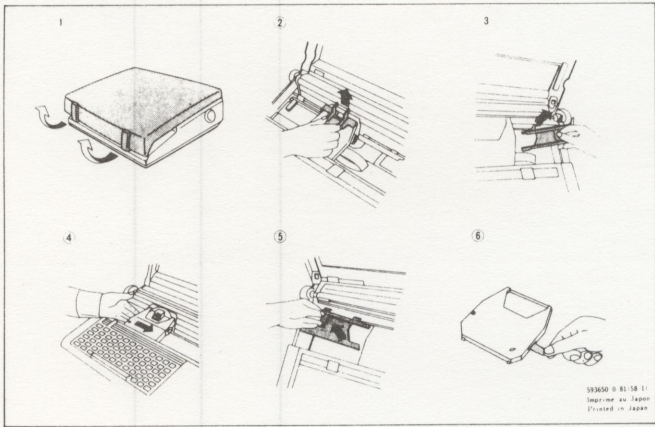
MAIN-
REF. NO.

SH-920

1



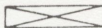
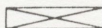
2



PARTS CODE & PARTS NAME

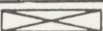
Model: CE-58

Model: CE-58

MAIN-REF. NO.	SH-920	Functional group name	PRINTED MATTER						
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK	
						FROM	UP TO		
1		Instruction Book	1						
2		Unpacking Instruction Sheet	1						

SPECIAL PARTS

NAME CODE COLOR & DESCRIPTION	Instruction Book for CE-58		Instruction Book for COMPACTRONIC 58		Unpacking Instruction Sheet							
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
ENGLISH (U.S.A.)			1A	593658011								
GERMAN	1A											
ENGLISH (Others)	1B											
FRENCH	1C											
DUTCH	1D											
NORWEGIAN	1E											
SPANISH	1F											
FINNISH	1G											
ITALIAN	1H											
SWEDISH	1I											
DANISH	1J											
SWISS-GERMAN	1K											
SWISS-FRENCH	1L											
ENGLISH (England)	1M											
ENGLISH (Canada)	1N		1N	593658026								
SWISS-GERMAN (No Brand)	1O											
SWISS-FRENCH (No Brand)	1P											
French (Canada)	1Q		1Q	593658029								
(CE-58 COMPACTRONIC 58					2A	U06992001						

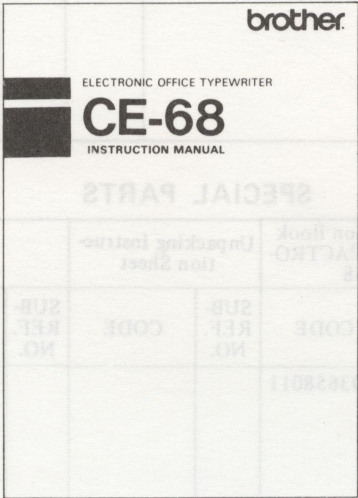
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-581-920

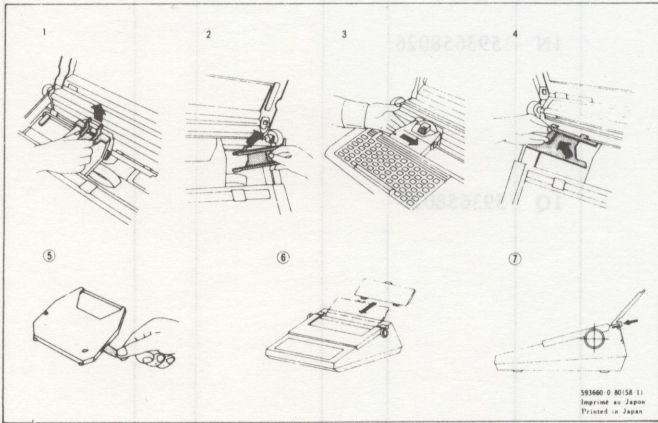
Model: CE-68

MAIN-REF. NO.	SI-920
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1

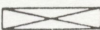


2



PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.	SI-920	Functional group name	PRINTED MATTER					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Instruction Book	1					
2		Unpacking Instruction Sheet	1					

SPECIAL PARTS

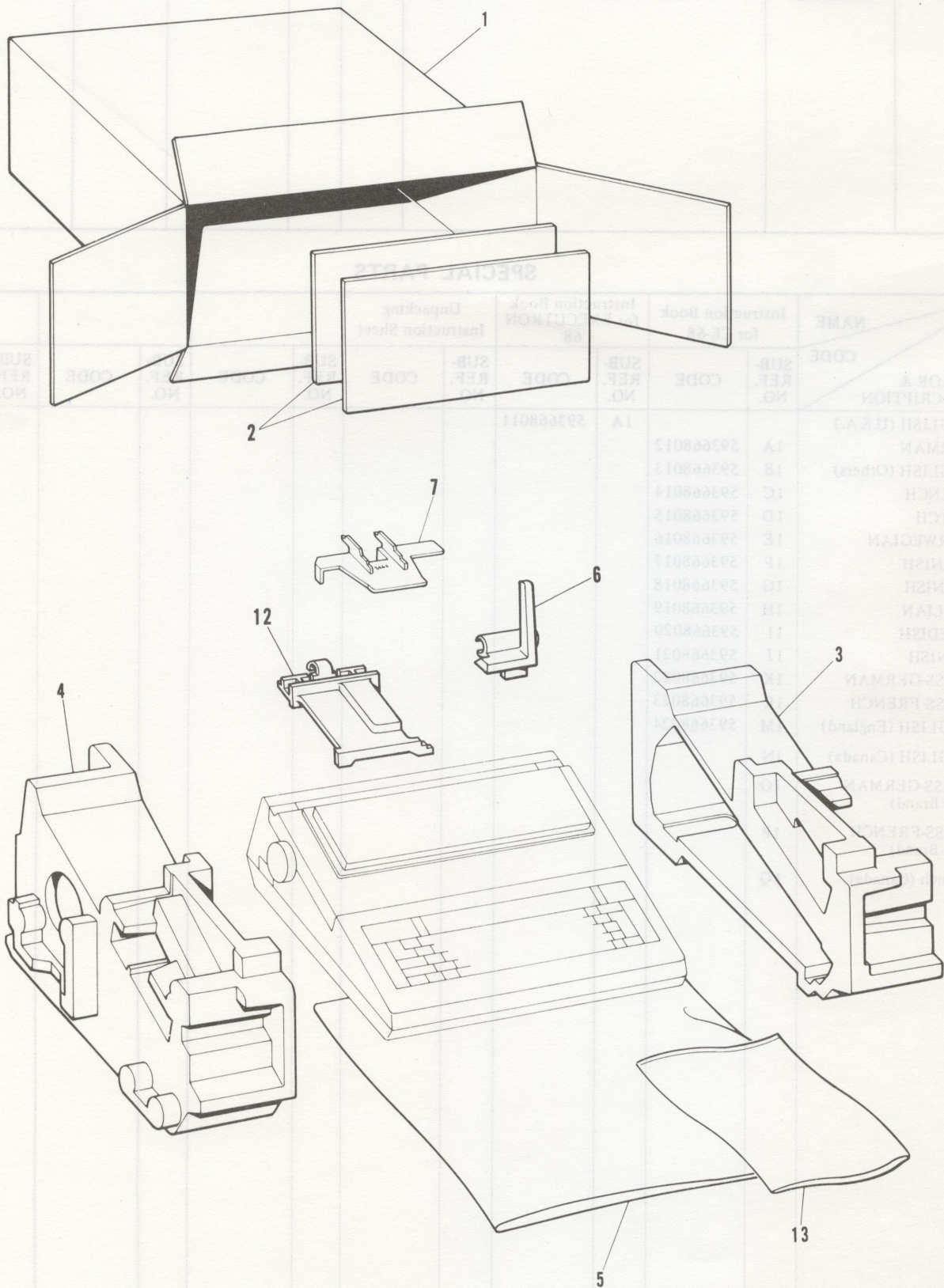
NAME CODE COLOR & DESCRIPTION	Instruction Book for CE-68		Instruction Book for EXECUTRON 68		Unpacking Instruction Sheet							
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
ENGLISH (U.S.A.)			1A	593668011								
GERMAN	1A	593668012										
ENGLISH (Others)	1B	593668013										
FRENCH	1C	593668014										
DUTCH	1D	593668015										
NORWEGIAN	1E	593668016										
SPANISH	1F	593668017										
FINNISH	1G	593668018										
ITALIAN	1H	593668019										
SWEDISH	1I	593668020										
DANISH	1J	593668021										
SWISS-GERMAN	1K	593668022										
SWISS-FRENCH	1L	593668023										
ENGLISH (England)	1M	593668024										
ENGLISH (Canada)	1N											
SWISS-GERMAN (No Brand)	1O											
SWISS-FRENCH (No Brand)	1P											
French (Canada)	1Q											
(CE-68 EXECUTRON 68)					2A	U08153001						

Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-681-920

Model: CE-58

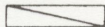
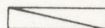
MAIN- REF. NO.	SH-930
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PARTS CODE & PARTS NAME

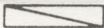
Model: CE-58

Model: CE-58

MAIN-REF. NO.	SH-930	Functional group name	PACKING MATERIAL						
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK	
						FROM	UP TO		
1		Carton	1						
2	561568000	Pad for Carton	2						
(3 ~ 4)	562327001	Styrofoam Unit for Case	1						
3	562328001	Styrofoam (R) for Case	1						
4	562329001	Styrofoam (L) for Case	1						
5		Polyvinyl Bag for Body	1						
6	U60365000	Head Protector (R)	1						
7	562466001	Pad for Head Release	1						
12	562979000	Head Protector (L)	1						
13		Polyvinyl Bag for Instruction Book	1						

SPECIAL PARTS

NAME COLOR & DESCRIPTION	Carton for CE-58		Carton for COMPACTRO-NIC 58		Polyvinyl Bag for Body		Polyvinyl Bag for Instruction Book					
CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
No Brand	1A		1A	562925022								
brother (U.S.A.)	1B											
brother (Europe, others)			1B	562323041								
brother (Canada)												
brother (France)	1C											
w/o Hole					5A	560196000	13A	560464000				
w/ Hole					5B	561140000	13B	560030000				

Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-581-930

PACKING MATERIAL

Model: CE-68

MAIN-REF. NO.

SI-930

REF. NO.	SUB. REF. NO.	CODE	NAME	QTY.	CH.	NEW CODE	FROM
1			Carton	1			
2		561268000	Pad for Carton	3			
3	(3-4)	563327001	Styrofoam Unit for Case	1			
4		563328001	Styrofoam (R) for Case	1			
5		563329001	Styrofoam (L) for Case	1			
6			Polystyrene Bag for Body	1			
7		560365000	Head Protector (R)	1			
8		563466001	Pad for Head Protector	1			
9		563467000	Head Protector (L)	1			
10			Polystyrene Bag for Head Protector	1			

1

2

3

4

5

6

7

8

9

10

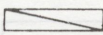
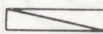
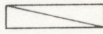
11

12

13

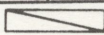
PARTS CODE & PARTS NAME

Model: CE-68

MAIN-REF. NO.	SI-930	Functional group name	PACKING MATERIAL					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Carton	1					
2	561568000	Pad for Carton	2					
(3 ~ 4)	562316001	Styrofoam Unit for Body	1					
3	562317001	Styrofoam (R) for Body	1					
4	562318001	Styrofoam (L) for Body	1					
5		Polyvinyl Bag for Body	1					
6	U60365000	Head Protector (R)	1					
7	562466001	Pad for Head Release	1					
12	562979000	Head Protector (L)	1					
13		Polyvinyl Bag for Instruction Book	1					

SPECIAL PARTS

NAME COLOR & DESCRIPTION	Carton for CE-68		Carton for EXECUTRON 68		Polyvinyl Bag for Body		Polyvinyl Bag for Instruction Book					
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
No Brand	1A	562321021	1A	562926022								
brother (U.S.A.)												
brother (Europe, others)	1B	562321054	1B	562321041								
brother (Canada)												
brother (France)	1C	562321055										
w/o Hole					5A	560196000	13A	560464000				
w/ Hole					5B	561140000	13B	560030000				

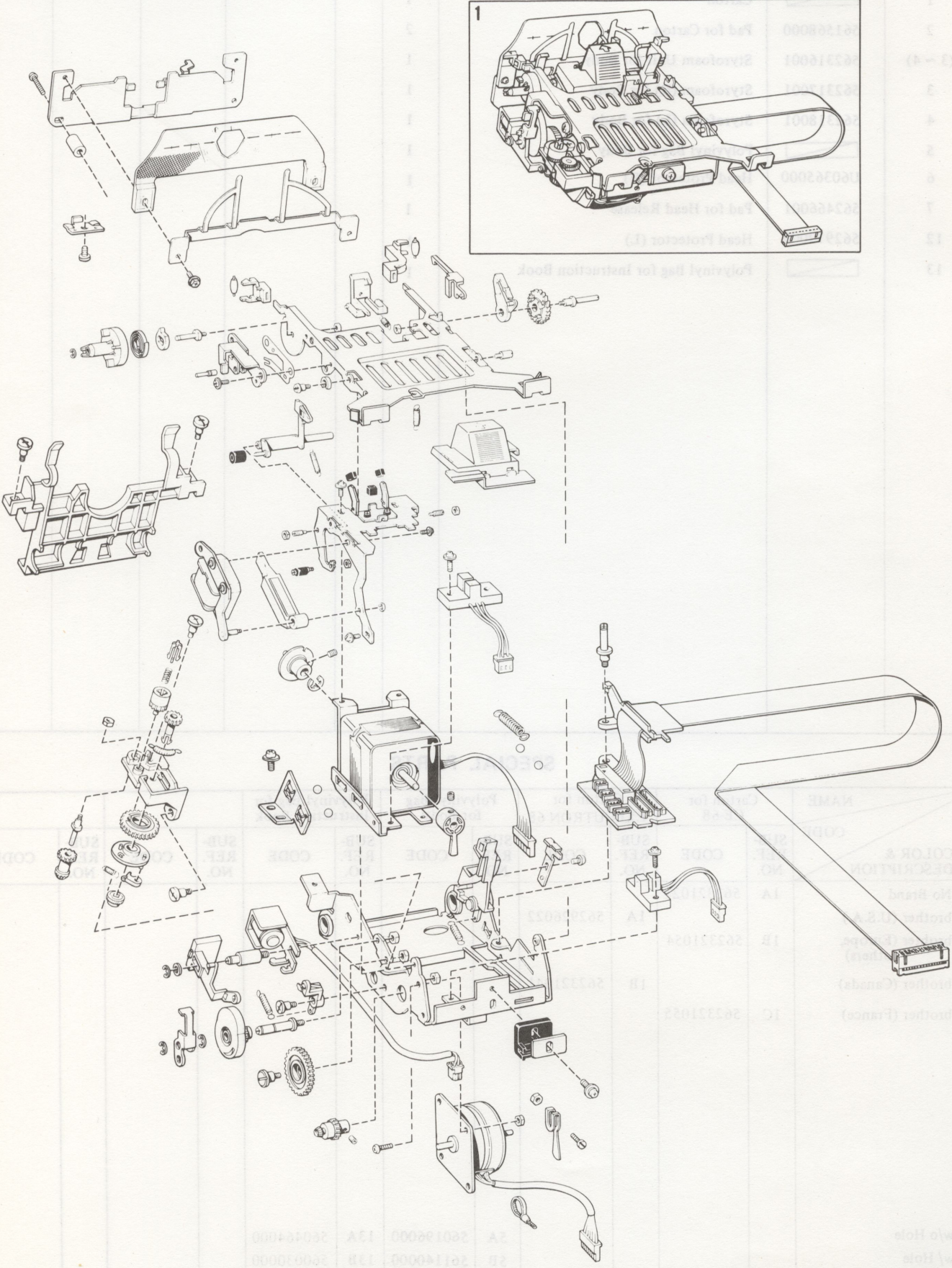
Caution: To visualize the  part and ordering procedures, please refer to the Preface.

536-681-930

PRINT HEAD ASSEMBLY

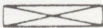
Model: CE-58, CE-68

MAIN- REF. NO.	SF-940
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PARTS CODE & PARTS NAME

Model: CE-58, CE-68

MAIN-REF. NO.	SF-940	Functional group name	PRINT HEAD ASSEMBLY					
SUB-REF. NO.	CODE	NAME	Q'TY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Print Head Assembly	1					

SPECIAL PARTS

NAME CODE COLOR & DESCRIPTION	Print Head Assembly											
	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE	SUB-REF. NO.	CODE
England	1A	U06498003										
U.S.A., others	1B	U06390001										

PARTS CODE & PARTS NAME

Model: CP-28/CR-43

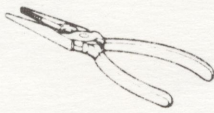
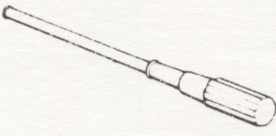
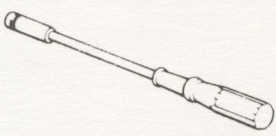
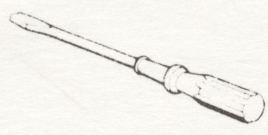
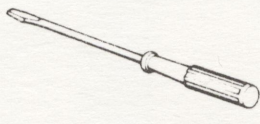
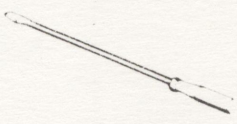
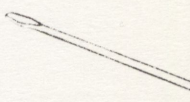
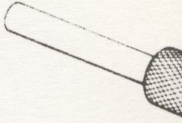
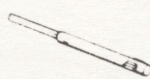
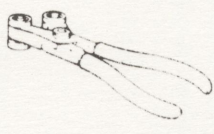
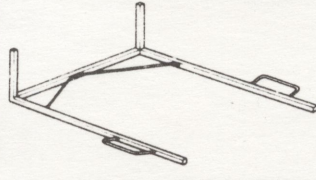
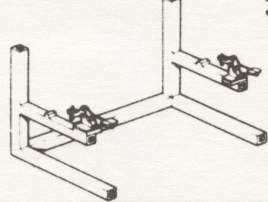
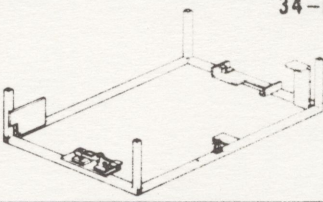
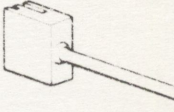
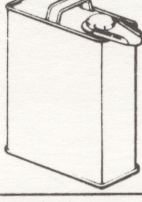
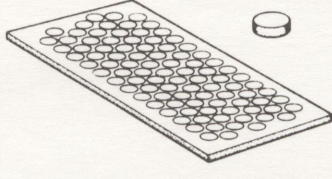
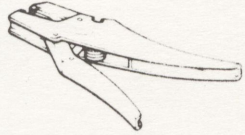
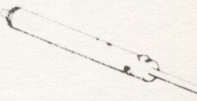
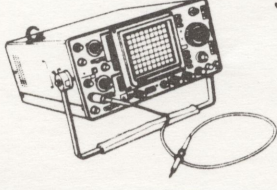
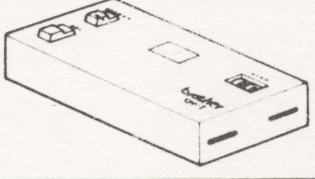
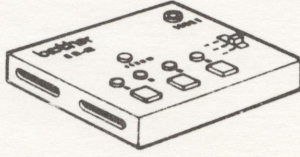
SUB REF. NO.	CODE	NAME	QTY	C/P	NEW CODE	PRODUCTION		REMARK
						FROM	UP TO	
1		Print Head Assembly	1					

SPECIAL PARTS

COLOR & DESCRIPTION		NAME		Print Head Assembly		SUB- REF. NO.		CODE		SUB- REF. NO.		CODE	
1A	100428003	1B	000390001										

MAIN-
REF. NO.

ZX-

1 	2 	3 	
9 	10 	11 	
17 	18 	19-1 	
26 	27 	28 	
34-A~E 	34-F 	34-G 	
42-A~E 	43-A~D 	44 	
50 	51 	52 	
59 	60 	61 	
67A 			

4	5	6	7	8
12	13	14	15	16
19-2	22	23	24	25
29	30	31	32	33
35	36	37	39-A~F	41
45	46	47	48	49
53	54	55	57	58
62	63	64	65	66

MAIN- REF. NO.	ZX-	Functional group name	ADJUSTING												
SUB- REF. NO.	Tool Name	Model	JP -1	JP -2	JP -5	JP -7	JP -8	JP -10	JP -12	JP -14	JP -11	JP-15 II&III	IV	JP-16 II&III	
1	Plier (150 m/m)		○	○	○	○	○	○	○	○	○	○	○	○	
2	Box Driver (4.5 m/m)		○				○		○		○				
3	Box Driver (5.0 m/m)				○	○	○	○	○		○				
4	Box Driver (5.5 m/m)		○		○			○		○	○	○	○	○	
5	Box Driver (6.0 m/m)		○	○	○		○	○	○	○	○	○	○		
6	Box Driver (7.0 m/m)		○					○		○	○				
7	Box Driver (8.0 m/m)						○	○	○			○	○		
8	Box Driver (10.0 m/m)			○											
9	Driver (75 m/m)		○	○	○	○	○	○	○	○	○	○	○	○	
10	Driver (70 m/m)		○	○	○	○	○	○	○	○	○	○	○	○	
11	Driver (4.7 x 200 m/m)		○	○	○	○	○	○	○	○	○	○	○	○	
12	Driver (6.2 x 200 m/m)			○	○		○	○	○	○	○				
13	Plus Driver (NO-1)		○	○	○	○	○	○	○	○	○	○	○	○	
14	Plus Driver (NO-2)			○	○	○	○	○	○	○	○	○	○	○	
15	Spring Driver		○	○	○	○	○	○	○	○	○	○	○	○	
16	Spanner (4.5 x 6 m/m)		○	○	○		○	○	○	○	○	○	○	○	
17	Spanner (5.0 x 8 m/m)			○		○	○	○	○		○			○	
18	Spanner (5.5 x 7 m/m)		○		○	○	○	○	○		○				
19-1	Spanner (8.0 x 10 m/m)			○						○	○				
19-2	Box Driver (10 m/m) for Adjusting Collar											○	○		
22	Box Spanner (4.5 m/m)		○												
23	Box Spanner (5.5 m/m)			○	○										
24	Box Spanner (6.0 m/m)									○					
25	Hexagonal Wrench (1.5 m/m)		○	○			○	○	○						
26	Hexagonal Wrench (2.0 m/m)			○	○	○	○	○	○	○	○	○	○	○	
27	Grip for Hexagonal Wrench		○	○	○	○	○	○	○	○	○	○	○	○	
28	Type Bar Adjusting Tool		○	○	○	○	○	○	○						
29	Hook for Spring		○	○	○	○	○	○	○	○	○	○	○	○	
30	Rod Guide Tool				○	○	○	○	○	○	○			○	
31	Pincette (150 m/m)		○	○	○	○	○	○	○	○	○	○	○	○	
32	Tool Carrying Bag		○	○	○	○	○	○	○	○	○	○	○	○	
33	Rotate Drum Winding Tool									○					
34 (A)	Repair Stand for JP-5				○										
(B)	Repair Stand for JP-7					○									
(C)	Repair Stand for JP-10							○							
(D)	Repair Stand for JP-14									○					
(E)	Repair Stand for JP-11										○				
(F)	Repair Stand for JP-15											○	○		
(G)	Repair Stand for JP-16													○	

II & III : Mechanical Portion

IV : Electronic Portion

Caution : Tools with (*) mark should be supplied locally in each country be

E & PARTS NAME

TOOL KIT FOR TYPEWRITE																					
16	JP-16X		SUB-REF. NO.	Tool Name	Model	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP-15		JP-16		JP-16X	
IV	IV	IV				-1	-2	-5	-7	-8	-10	-12	-14	-11	IV	IV	IV	IV	IV	IV	
○	○	○	35	Carriage Rail Adjusting Tool		○		○	○	○	○	○	○	○				○	○		
			36	L-Hexagonal Wrench (2.0 m/m)									○								
			37	Thin Spanner (5.5 x 7 m/m)									○								
○	○	○	39 (A)	Wire Gauge (1.0 x 100 m/m)												○	○			○	○
	○	○	(B)	Wire Gauge (3.5 x 100 m/m)												○	○	○	○	○	○
			(C)	Wire Gauge (1.1 x 100 m/m)														○	○		
			(D)	Wire Gauge (0.5 x 100 m/m)														○	○	○	○
			(E)	Wire Gauge (0.8 x 100 m/m)														○	○		
○	○	○	(F)	Wire Gauge (0.2 x 100 m/m)																○	○
○	○	○	41	Platen Set Gauge												○	○				
○	○	○	42 (A)	Lubricating Oil (Spinocs Oil #4S)		○		○	○	○	○	○	○								
	○	○	(B)	Lubricating Oil (Uniway Oil #68)		○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	(C)	Lubricating Oil (Silicon Oil FK96)										○				○	○	○	○
○	○	○	(D)	Lubricating Oil (Mobile Oil)		○			○												
○	○	○	(E)	Lubricating Oil (Turbine Oil)						○	○	○	○							○	○
○	○	○	43 (A)	Lubricating Grease (Epinoc Grease #1)				○		○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	(B)	Lubricating Grease (Grease B)		○		○	○	○	○	○	○	○				○	○	○	○
			(C)	Lubricating Grease (Grease A)							○		○								
			(D)	Lubricating Grease (Silicon Grease KS64F)				○		○		○	○	○				○	○	○	○
			44	Oiler		○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
			45	Glue												○	○				
	○	○	46	Tester (MD-200C)												○	○	○	○	○	○
	○	○	47	Connector & Knob Removing Tool												○	○	○	○	○	○
	○	○	48	Connector												○	○				
○	○	○	49	Key Unit													○				
○	○	○	50	Conducting Sponge (Per 100 pcs.)													○				
			51	Nipper (No. 55S)													○		○		○
○	○	○	52	Stripper													○		○		○
○	○	○	53	Solder Sucker (DS-110)													○		○		○
○	○	○	54	Magnet (15 x 17 x 7 m/m)												○	○			○	○
○	○	○	55	Snap Ring Holder (C-Type ST-1)												○	○				
			57	Bending Tool (4.6 x 70 m/m)												○	○				
			*58	Soldering Tool													○		○		○
			*59	Syncroscope													○		○		○
			60	Linear Puls Motor Set Gauge												○	○				
			61	Checker for Driver Board (CH-1)												○	○				
			62	Print Wheel Set Gauge														○	○		
			63	Extension Cable														○	○		
○			64	Hexagonal Wrench (2.0 x 50 m/m)														○	○	○	○
			65	Space Pinion & Governor Gear Set Plate (Elite only)														○	○		
			66	Head Rope Tension Adjustment Scale (230 g)																○	○
			67A	Head/Motors Home Position Setting Checker (CH-60A)																○	○

ause of the difference of electrical specification.

ZX-

CE-58/68 VA

SERVICE MANUAL

AT 82-52-10

JALMAH 10111130

SERVICE MANUAL

MECHANICAL PORTION

MODEL : CE-58, CE-68

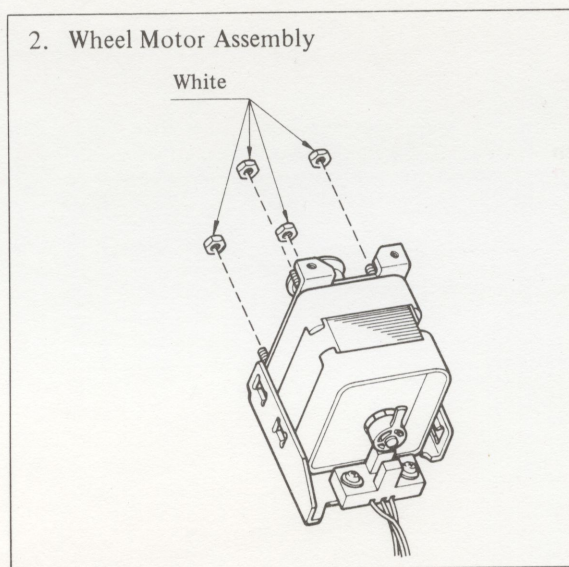
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I. GENERAL NOTES – IMPORTANT

1. The power supply cord should be removed from wall socket before the removal of covers, mechanical adjustment or removal of printed circuit board.
2. The AC plug itself must be pulled when the connector is removed from the receptacle.
Do not pull the AC cord itself.
3. Screws and nuts should be tightened properly.
There should be no loosened screws and nuts.
4. The power supply from the wall outlet should correspond the rated voltage for the machine.
5. The power supply cord should be removed from the wall during continuity testing.
6. Use only Brother cassette ribbons and correction tapes.
Other brands can be used, but Brother cannot guarantee satisfaction.
7. Do not touch the screws with white paint, which means the factory adjustment and requires the special jig.
The followings are screws with white paint.



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REV. Covers

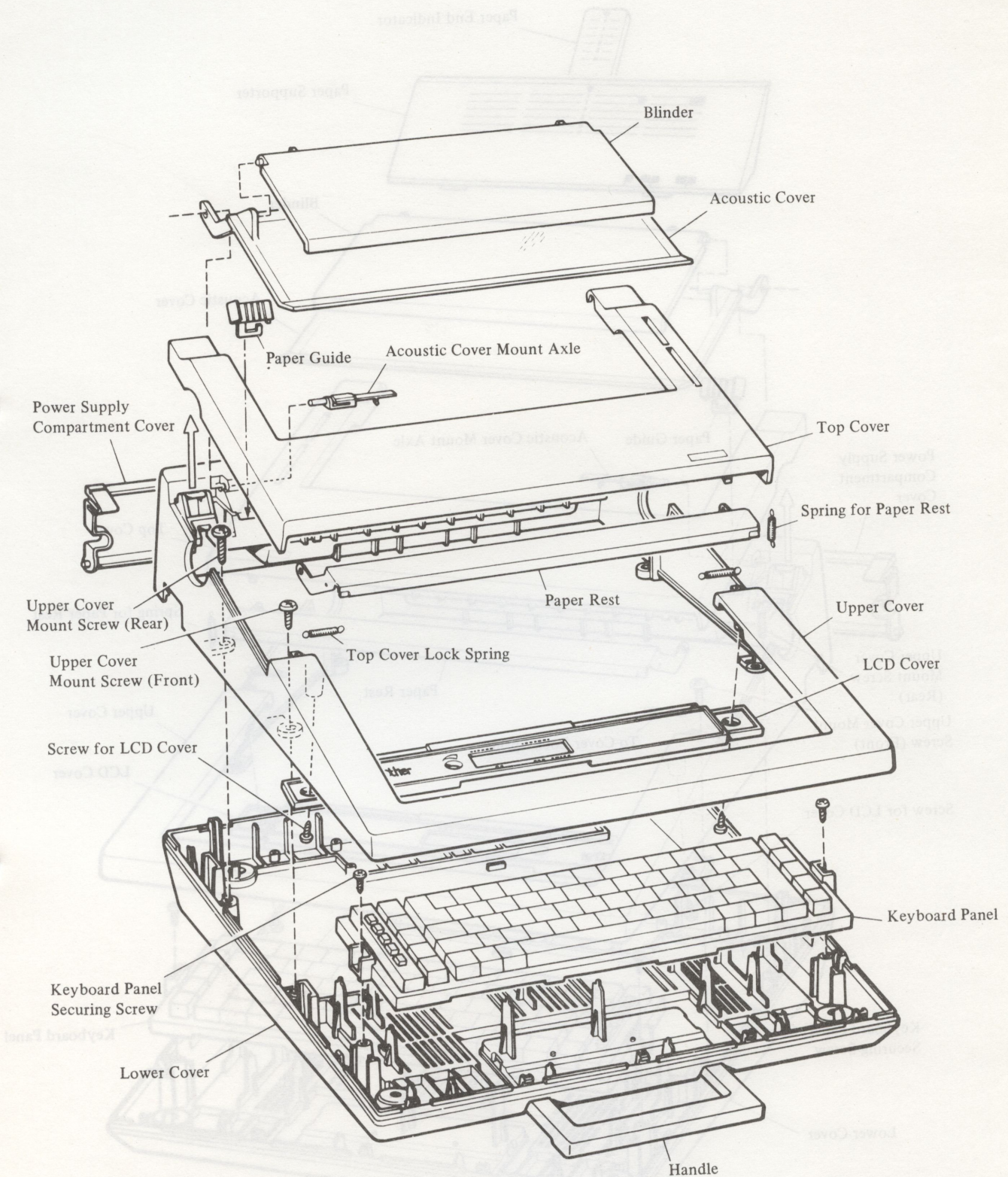


Fig. 1-1 (CE-58)

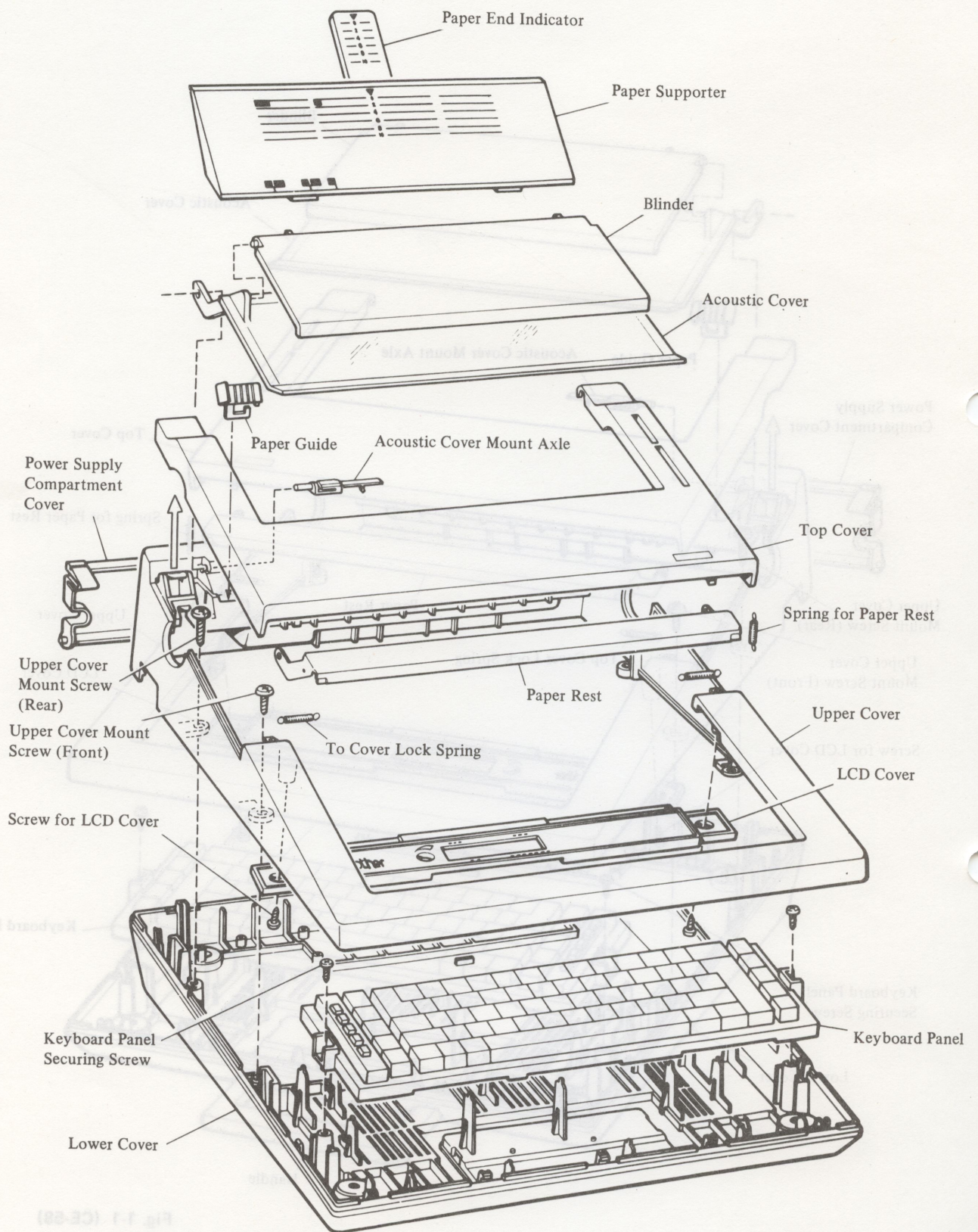


Fig. 1-2 (CE-68)

1) Removal and installation of covers

The covers can be removed in the following steps of procedure:

(They can be installed again in the inverse steps.)

Upper cover

1. Turn off the power switch and unplug the power cord.
2. Remove the left and right platen knobs.
To remove the platen knobs, open the top cover.
3. Remove the upper cover assembly.
Remove two front upper cover mount screws (6 x 13) and two rear upper cover mount screws (6 x 17).
While holding down the lower cover inside bottom by left (or light) hand (it is recommended to locate the print head to the left (or right) extremity of its travel for easy access of hand), and pull up the upper cover by right (left) hand. In removing the upper cover, force should be applied near the margin scale (LCD cover) mounting right (left) screw and care should be taken not to hold the margin scale (LCD cover) itself by hand and pull it up.
4. Remove the power supply connector secured to the upper cover.
To remove the connector, take it out from the terminals of filter circuit board installed on the lower cover.

* The upper cover assembly itself can be disassembled as follows: (Fig. 1)

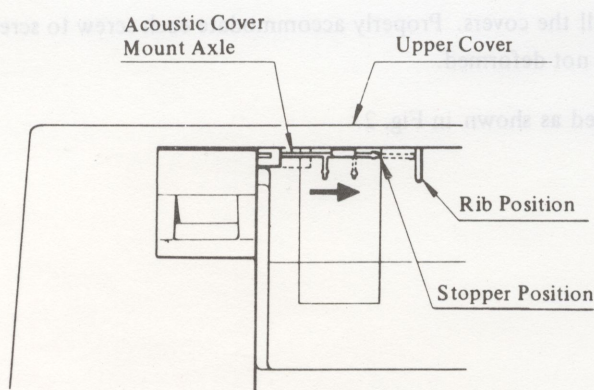


Fig. 1-1

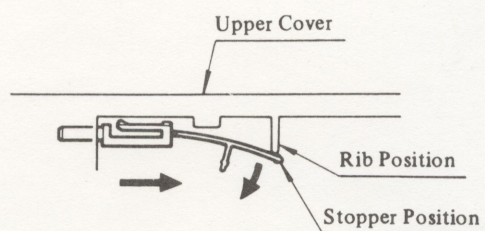


Fig. 1-2

- a. Remove the acoustic cover and blinder.
Move the each acoustic cover mount axles to left or right ward until stopper position of acoustic cover mount axle comes into contact with rib position of upper cover. (See Fig. 1-1)
The lift the acoustic cover and blinder to remove.
- b. Remove the acoustic cover mount axles.
To remove, bend each stopper position of acoustic cover mount axles downward. (See Fig. 1-2)
- c. Remove the top cover.
- d. Remove two margin scale (LCD cover) screws and two top cover lock springs to take out the margin scale (LCD cover).
- e. Remove the power supply compartment cover (lid).
- f. Remove the terminal base and cord holder to take out the power cord.
- g. Remove the paper test.
- h. Remove the paper guide.

Lower cover

1. Remove the keyboard panel.
To remove the panel, remove two keyboard panel securing screws and lift the panel.
2. Remove the P.C. board unit.
Refer to steps 3).
3. Remove the chassis unit.
Refer to steps 2).
4. Remove the power supply unit.
Refer to step 2).

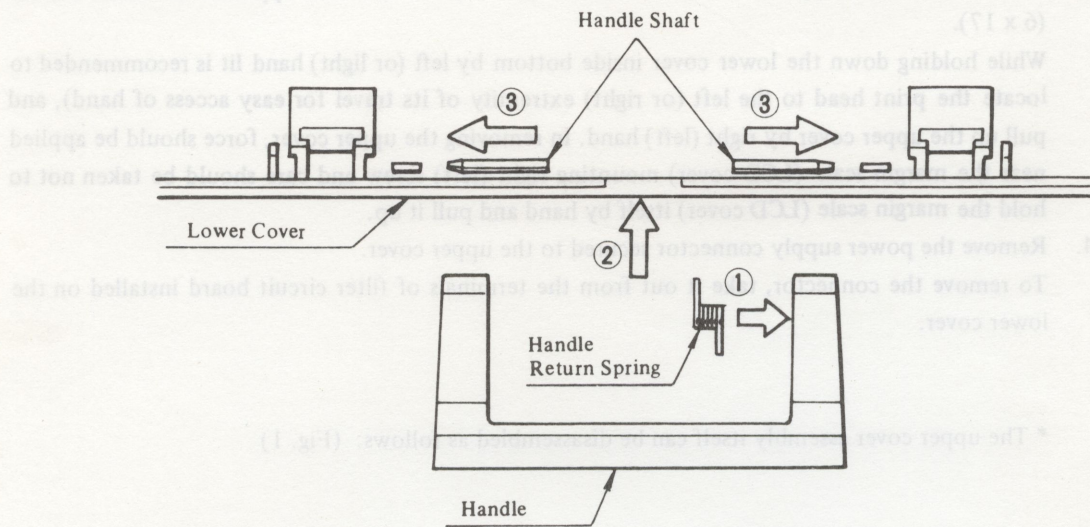


Fig. 2

Notes 1 : Tapping screw is used to install the covers. Properly accommodate each screw to screw hole so that female threads are not deformed.

2 : The handle should be assembled as shown in Fig. 2.

2) Removal of chassis unit

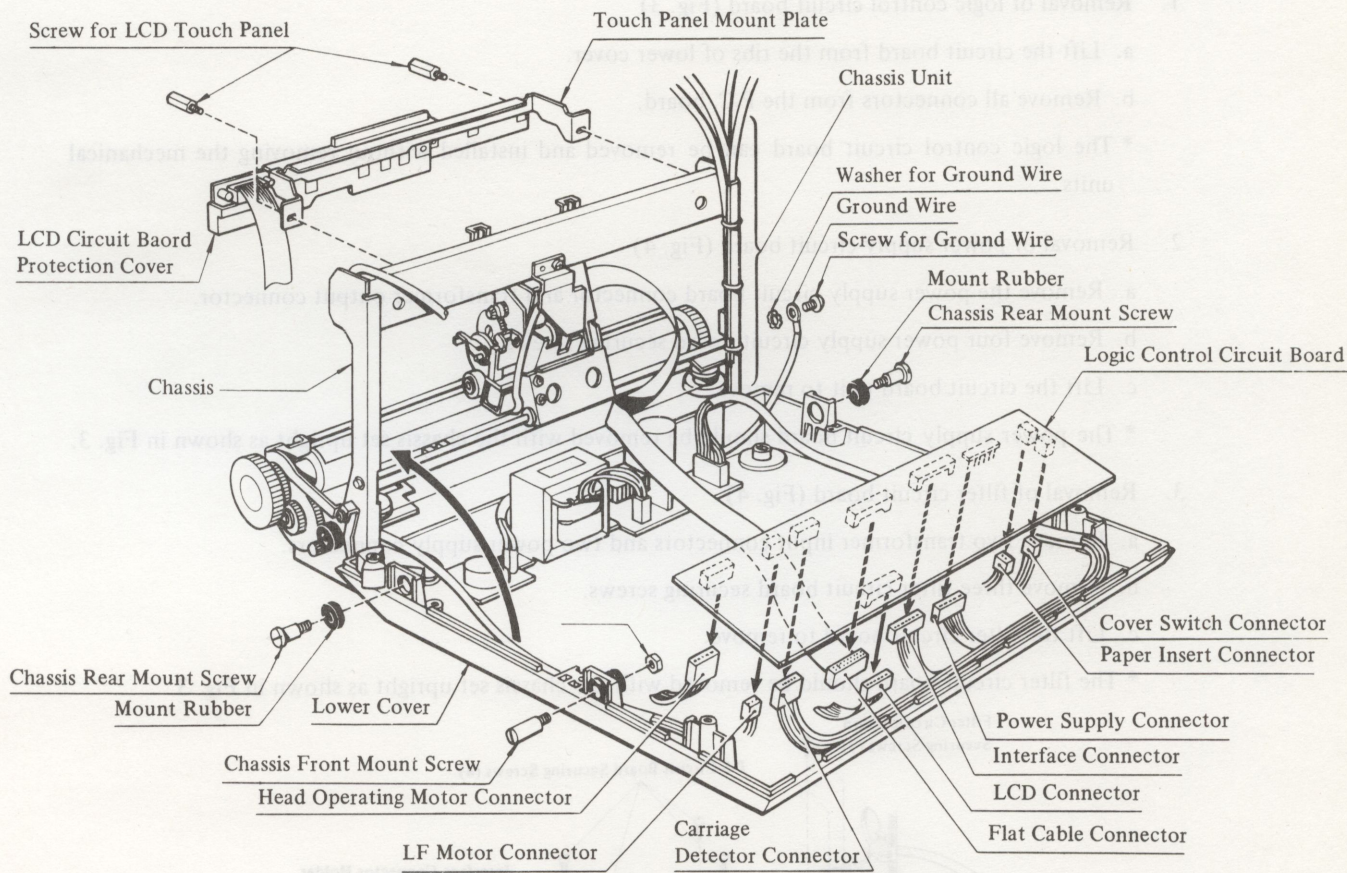


Fig. 3 (CE-58, CE-68)

The chassis unit can be removed after the removal of the upper cover and keyboard panel as follows:

1. Remove two rear chassis mount screws (stud screw with mount rubber).
2. Remove two front chassis mount screws (Axle screw with two nuts).
3. Lift the P.C. board, remove the four function connectors (interface, cover switch, paper insert, head operating motor), carriage index connector, flat cable connector, LCD connector and remove the ground wire set screw with washer found at the right rear of the chassis.
4. Set the chassis unit upright on the lower cover as shown in Fig. 4.
5. The chassis unit can be removed after the power supply circuit board connector and LF motor connector are removed.

3) Removal of circuit board unit

The circuit board unit can be replaced after the removal of the upper cover and keyboard panel as follows:

1. Removal of logic control circuit board (Fig. 3)
 - a. Lift the circuit board from the ribs of lower cover.
 - b. Remove all connectors from the P.C. board.

* The logic control circuit board can be removed and installed without removing the mechanical units.
2. Removal of power supply circuit board (Fig. 4)
 - a. Remove the power supply circuit board connector and transformer output connector.
 - b. Remove four power supply circuit board securing screws.
 - c. Lift the circuit board unit to remove.

* The power supply circuit board should be removed with the chassis set upright as shown in Fig. 3.
3. Removal of filter circuit board (Fig. 4)
 - a. Remove two transformer input connectors and two power supply connectors.
 - b. Remove three filter circuit board securing screws.
 - c. Lift the filter circuit board to remove.

* The filter circuit board should be removed with the chassis set upright as shown in Fig. 3.

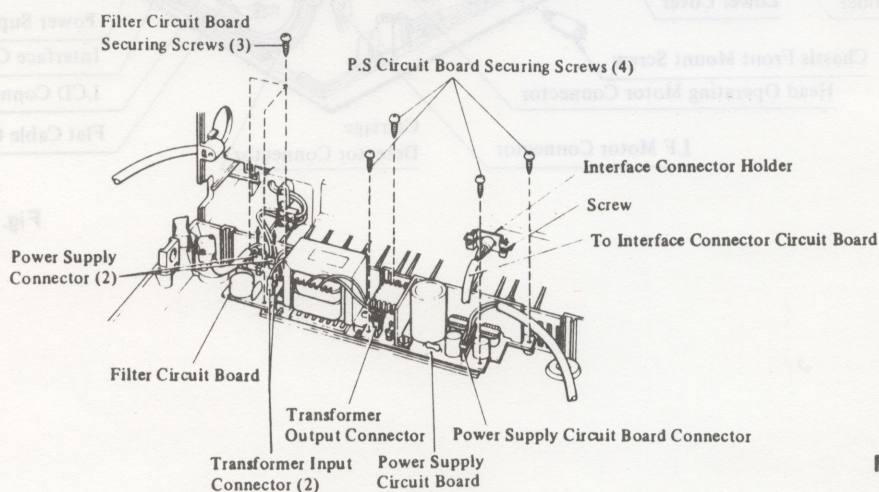
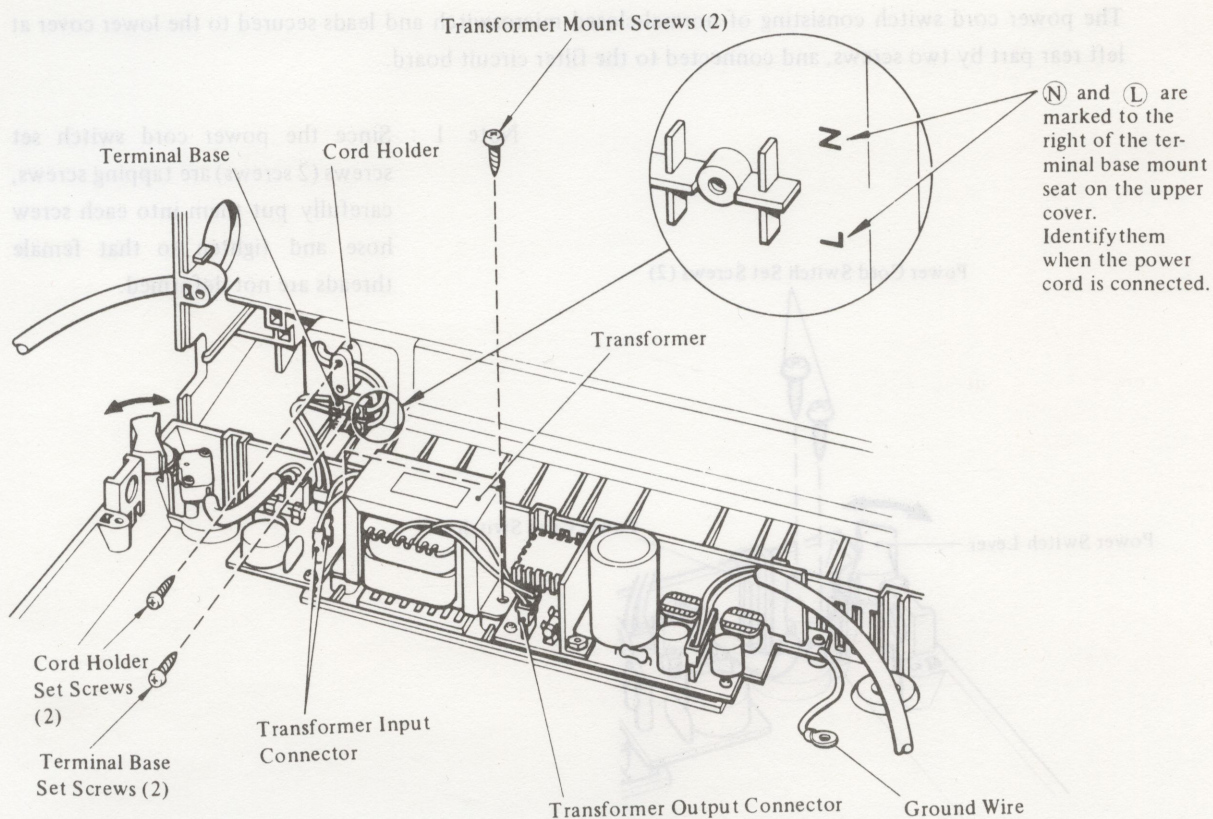


Fig. 4

2. Power supply unit

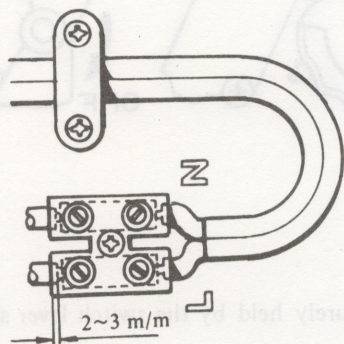


1) Power cord

The power cord stored in the compartment at the back of the upper cover is led into the interior through the hole made at the compartment, and connected to the terminal base secured to the upper cover.

The AC wires from the terminal base are connected to the filter circuit board

Notes 1 : The power cord should be secured and connected to the terminal base as shown to the left figure, so that the insulations are not tightened.



2 : The cord holder set screws and terminal base set screws are tapping screws.

Carefully put them into each screw hole and tighten so that female threads are not deformed.

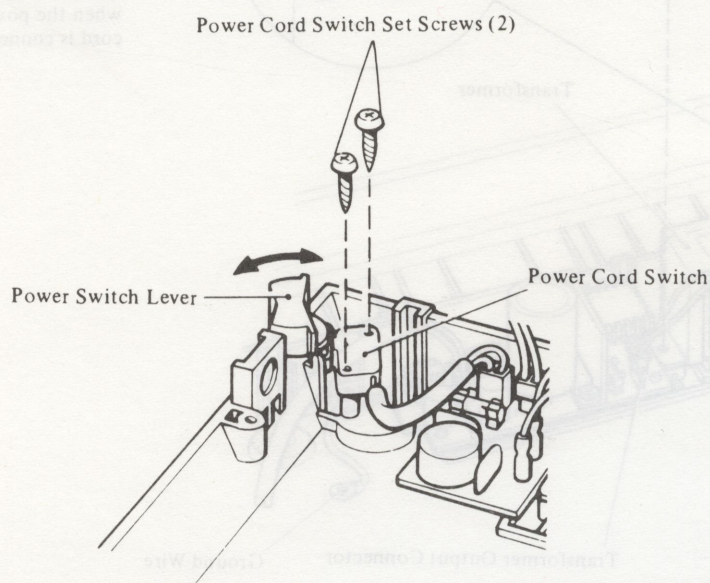
3 : AC wires should be discriminated between N and L .

For details, refer to the wiring diagram, para. 5).

2) Power cord switch

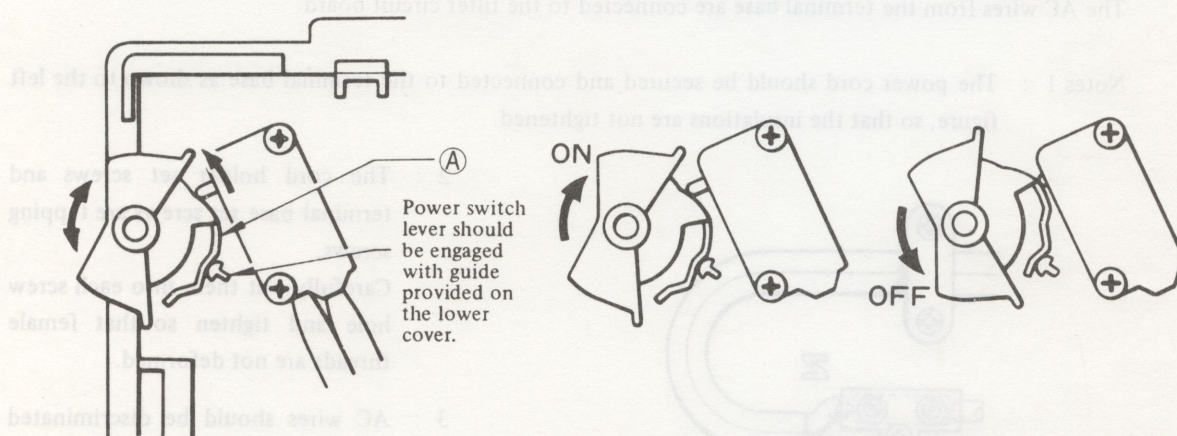
The power cord switch consisting of normal-closed microswitch and leads secured to the lower cover at left rear part by two screws, and connected to the filter circuit board.

Note 1 : Since the power cord switch set screws (2 screws) are tapping screws, carefully put them into each screw hole and tighten so that female threads are not deformed.



3) Power switch lever

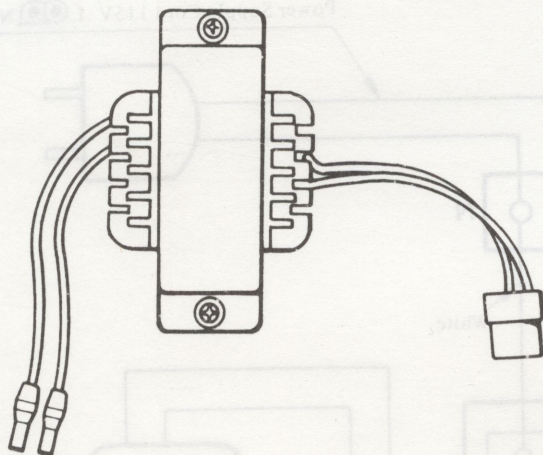
The power switch lever is located at the left of the power cord switch, and actuates the microswitch by its cam-like part (A).



Note 1 : The power switch lever should be securely held by the switch lever shafts of upper and lower covers.

4) Transformer

The thermal fuse equipped transformer is installed at the rear part of lower cover by two screws. Its input terminals are connected to the filter circuit board, and the output terminals to the power supply circuit board.

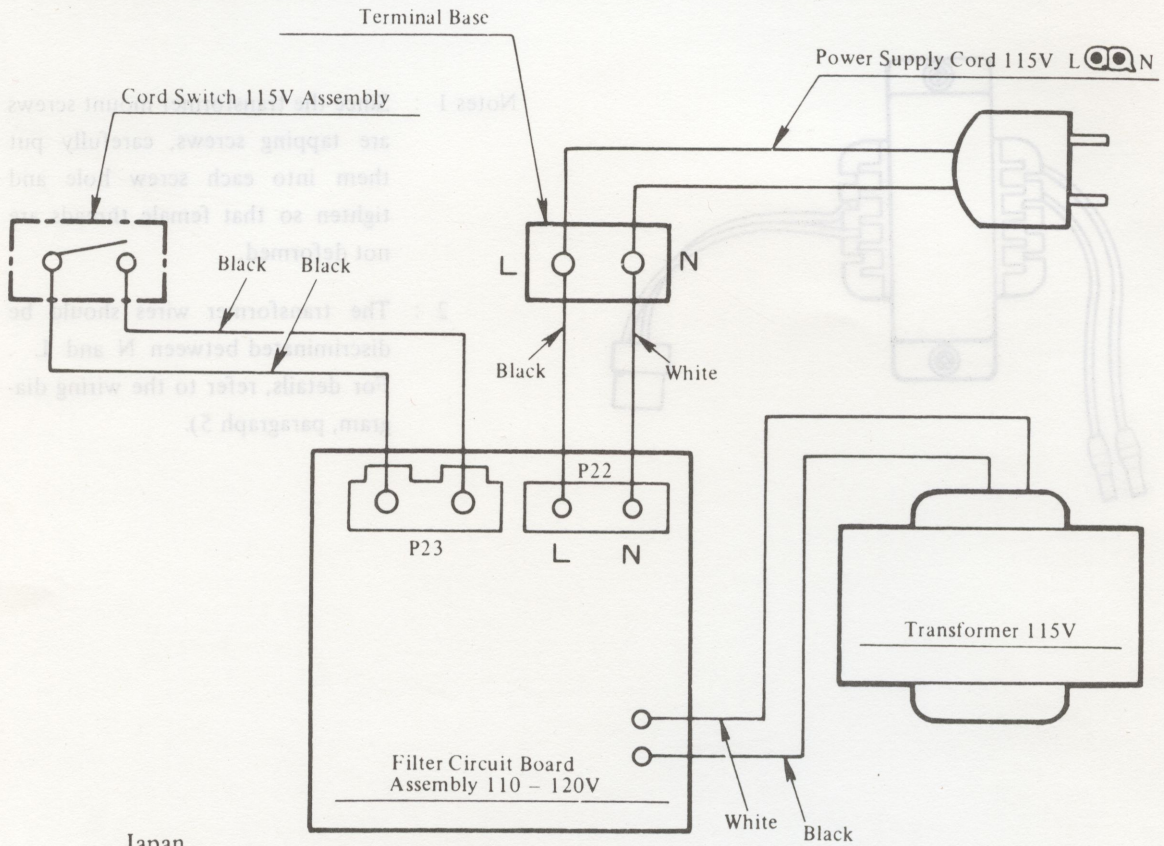


Notes 1 : Since the transformer mount screws are tapping screws, carefully put them into each screw hole and tighten so that female threads are not deformed.

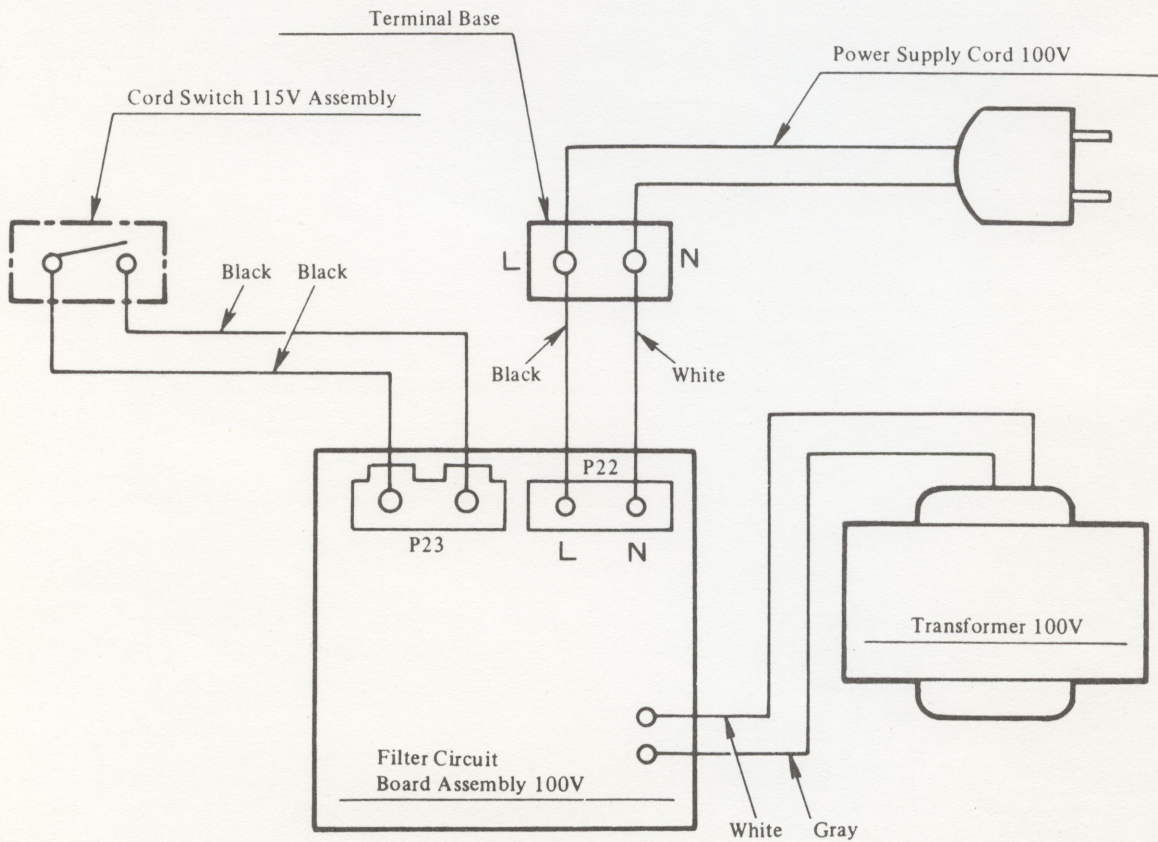
2 : The transformer wires should be discriminated between N and L . For details, refer to the wiring diagram, paragraph 5).

5) Wiring/connection diagram (Primary side)

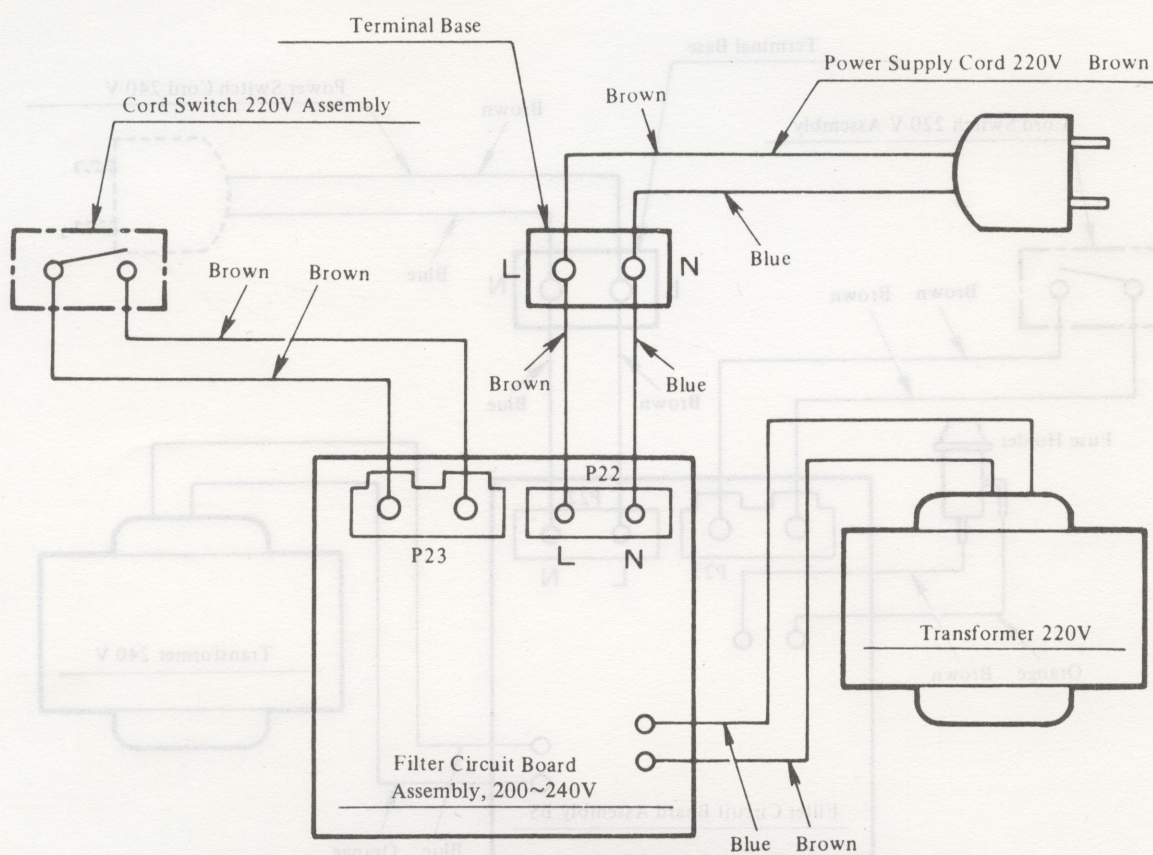
U.S.A, Canada



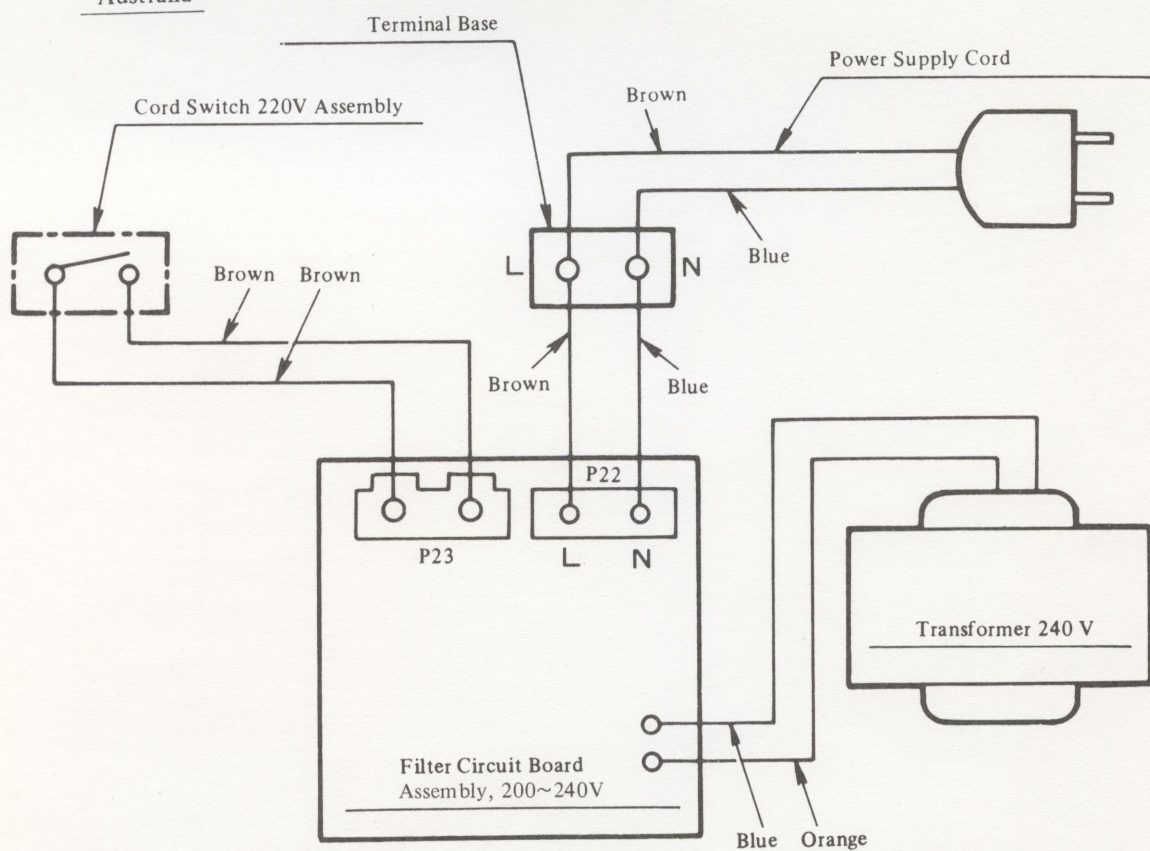
Japan

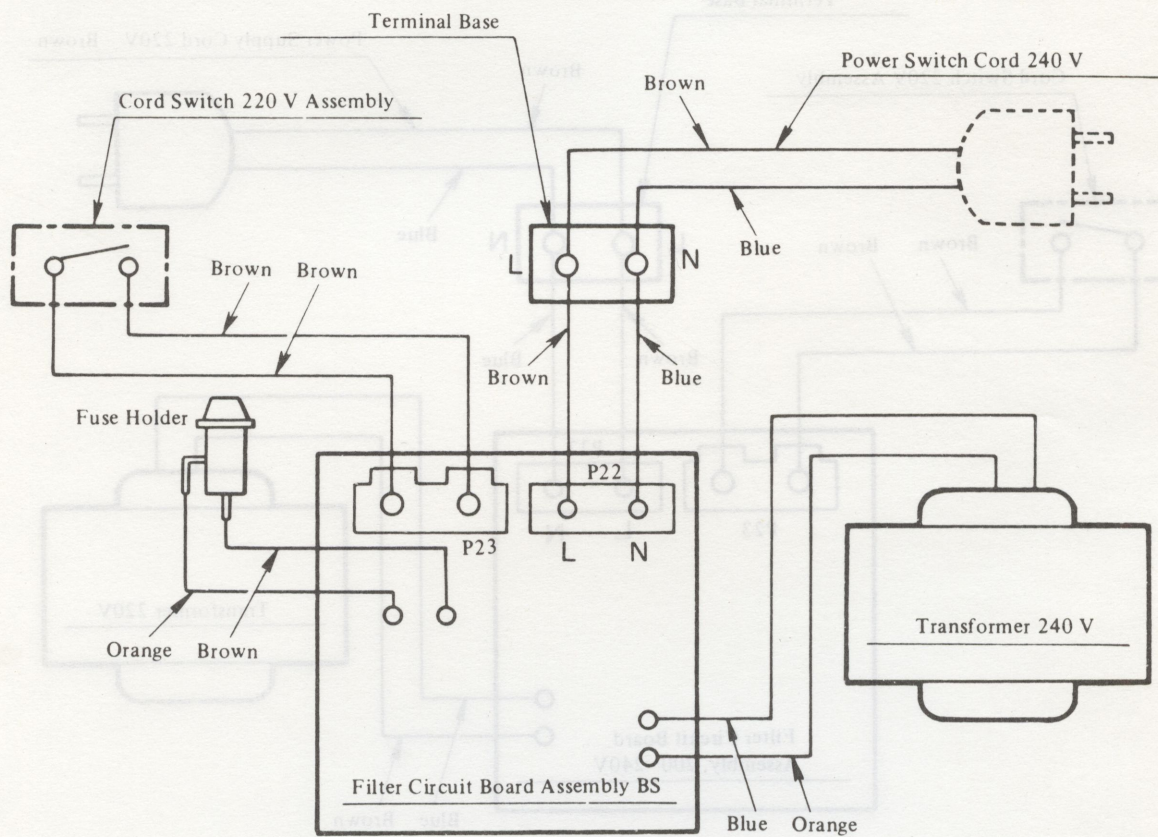


Europe (excluding Australia and England)



Australia



England

3. Composition of electronic section

Fig. 6 illustrates the composition of the electronic section.

The electronic section consists of the following circuit boards:

1. Filter circuit board
2. Power supply circuit board
3. Logic control circuit board (including keyboard circuit board)
4. Relay circuit board
5. LCD circuit board

1. Filter circuit board

This circuit board eliminates external noises from the AC line source and noises generated on the logic control circuit board.

2. Power supply circuit board

The input AC source is changed to DC +5V, +12V and +30V by this circuit board.

3. Logic control circuit board

This circuit board controls the wheel motor, carriage motor, LF motor, ribbon motor, and other components.

4. Relay circuit board

The wheel motor, ribbon motor, and the like, are connected to the logic control circuit board through this board.

5. LCD circuit board

This circuit board controls the display.

4. Operation of major electric components

Description is given here for motors, magnets solenoids and other major electric components shown in Fig. 6

1. Wheel motor and hammer magnet (solenoid)

The wheel motor drives the print wheel, and actuates the hammer magnet for printing. Stepping motor is used for wheel motor.

2. Wheel sensor

This sensor detects the home position of the print wheel.

3. Ribbon motor and ribbon sensor

The vertical movement of the ribbon cassette is driven by the ribbon motor. The ribbon is also wound by this motor. The sensor detects the motor shaft stop position. Stepping motor is used for ribbon motor.

4. Correction magnet (solenoid)

When this magnet is actuated, the ribbon motor drives the correction tape to the predetermined up position for correction of character.

5. Carriage motor and carriage index switch

The carriage motor is a stepping motor that drives the carriage. The carriage reference position is governed by this carriage index switch.

6. LF motor

The LF motor is a stepping motor that feeds and positions a paper.

7. Paper bail switch

While this switch is on, paper is continuously fed.

8. Cover switch

When this switch is actuated (top cover is opened), key-in operation becomes impossible.

9. Display

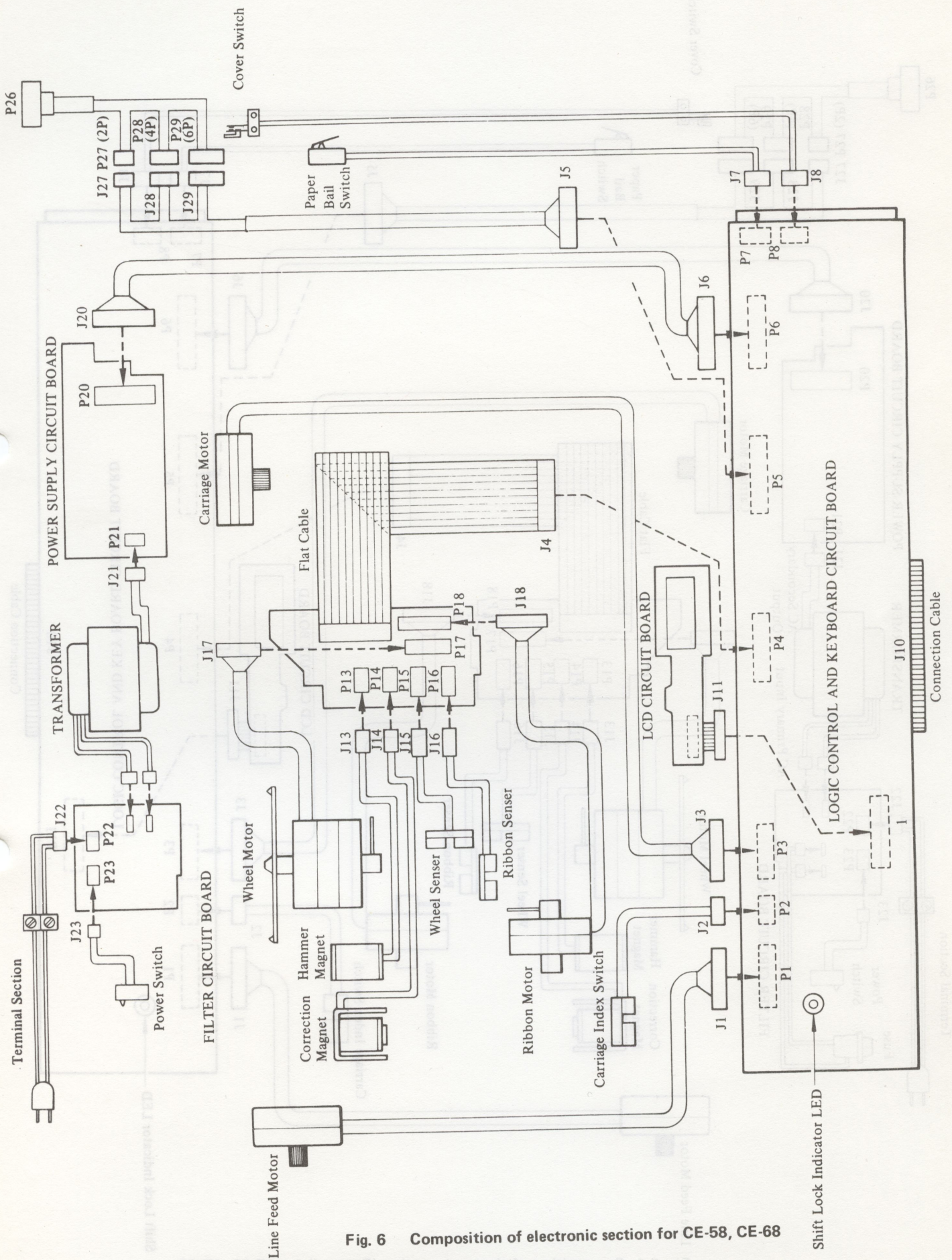


Fig. 6 Composition of electronic section for CE-58, CE-68

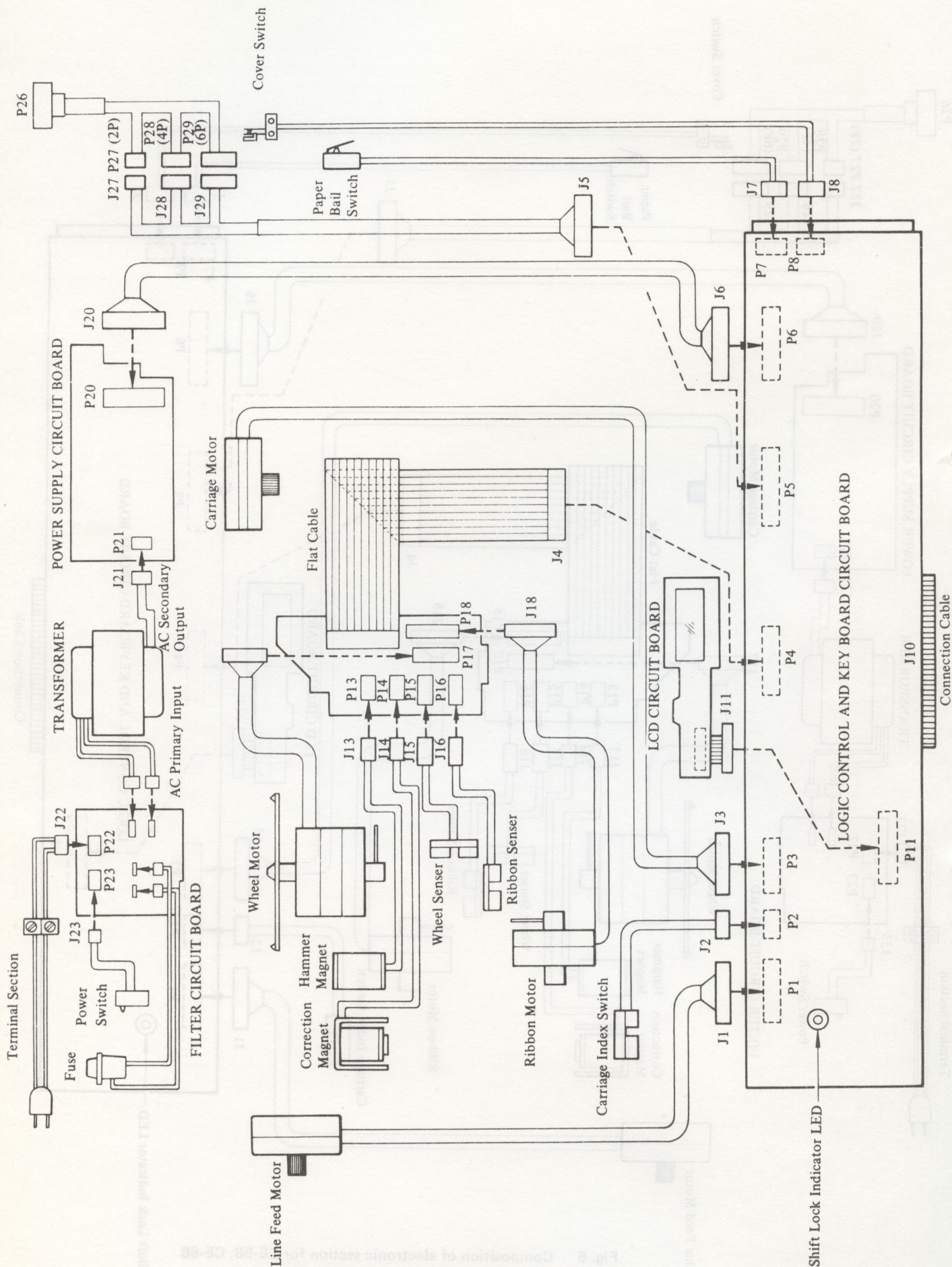


Fig. 6-1 Composition of electronic section (England) for CE-58, CE-68

5. Print mechanism

Print wheel having 96 characters embossed on pedal ends is indexed by stepping motor and the print hammer is actuated to print the indexed character.

The print mechanism is assembled on the head holder, and travels along the platen.

1) Wheel motor

The wheel motor is secured to the motor holder by nuts.

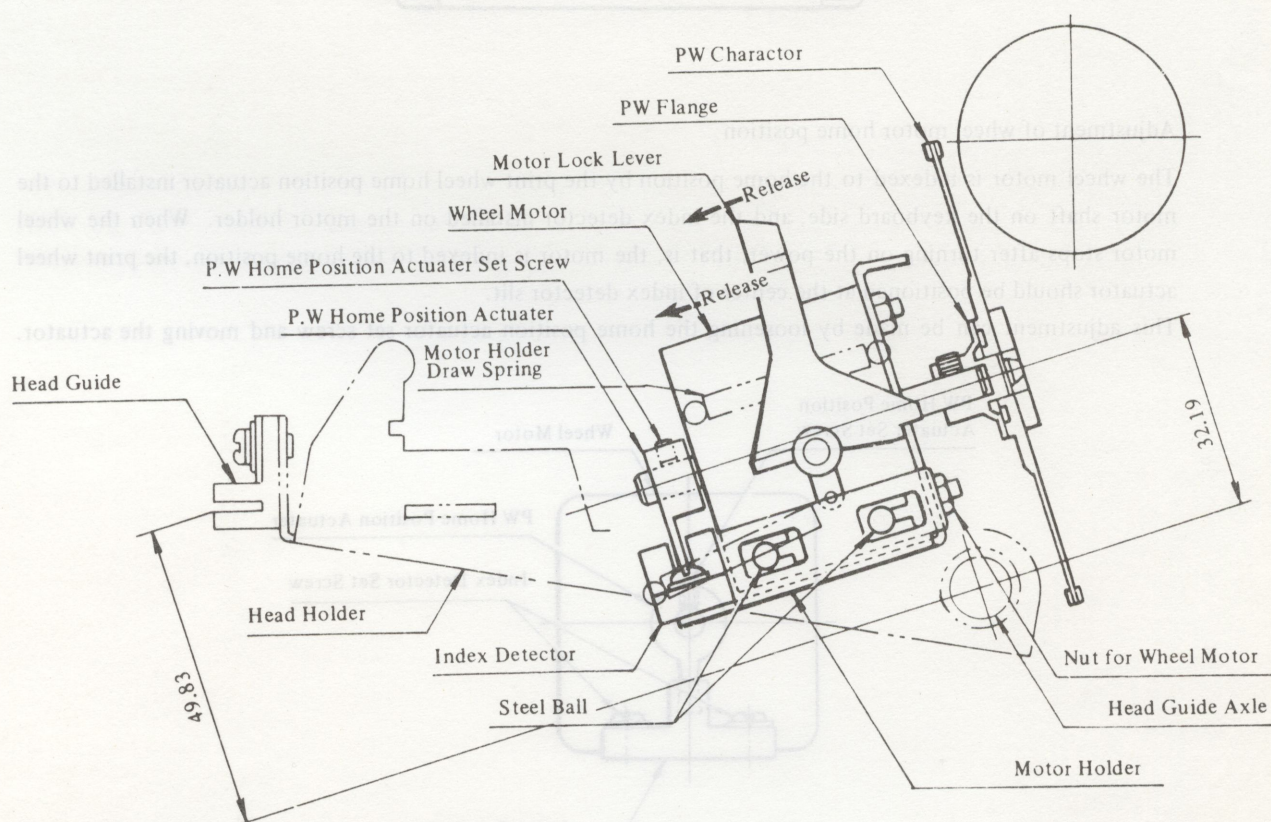
The motor holder is secured to the motor holder guide on one side, and to head holder through steel balls that permit the motor to be located to "lock position (for printing)" and "release position (for replacement of wheel)" by operating the motor lock lever.

The print wheel flange and print wheel with embossed characters are installed to the motor shaft on the platen side, and the wheel home position actuator to the motor shaft on the keyboard side.

The wheel motor is indexed to the home position by this actuator and index detector.

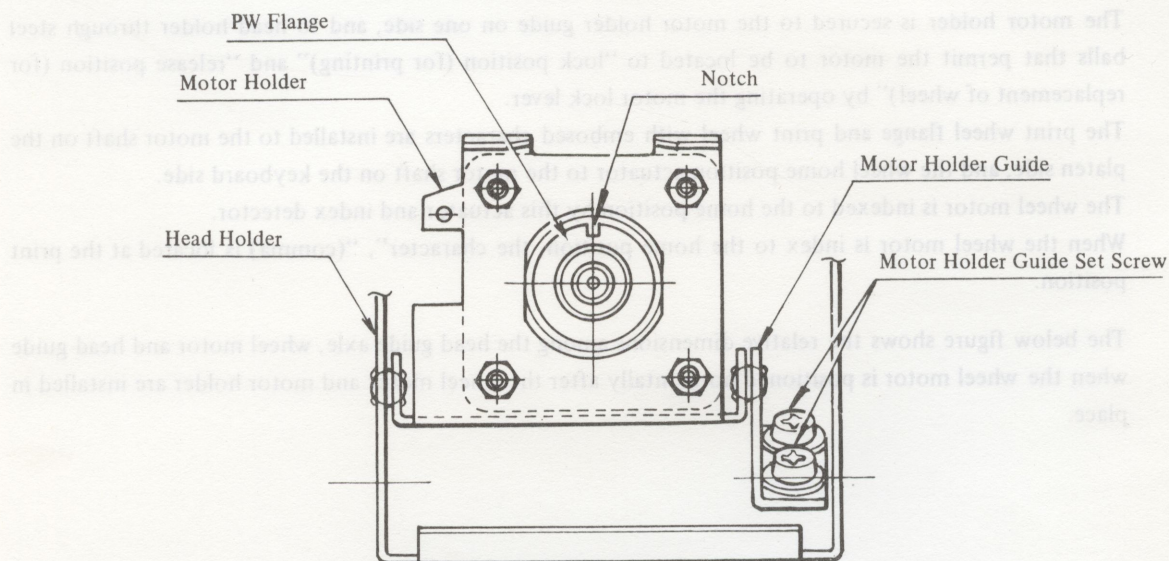
When the wheel motor is index to the home position, the character", "(comma) is located at the print position.

The below figure shows the relative dimensions among the head guide axle, wheel motor and head guide when the wheel motor is positioned horizontally after the wheel motor and motor holder are installed in place.



Installation and adjustment of motor holder guide

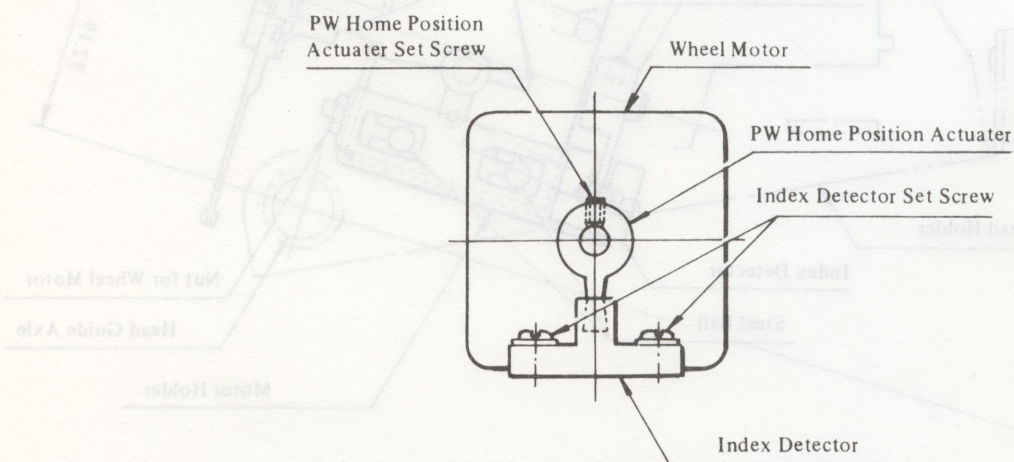
The motor holder guide should be installed so that there is no horizontal play between the motor holder and the head holder, and the motor holder guide, and that the motor holder can be moved by gravity of the wheel motor. To adjust, loosen the motor holder guide set screws and move the motor holder guide.



Adjustment of wheel motor home position

The wheel motor is indexed to the home position by the print wheel home position actuator installed to the motor shaft on the keyboard side, and the index detector installed on the motor holder. When the wheel motor stops after turning on the power, that is, the motor is indexed to the home position, the print wheel actuator should be positioned at the center of index detector slit.

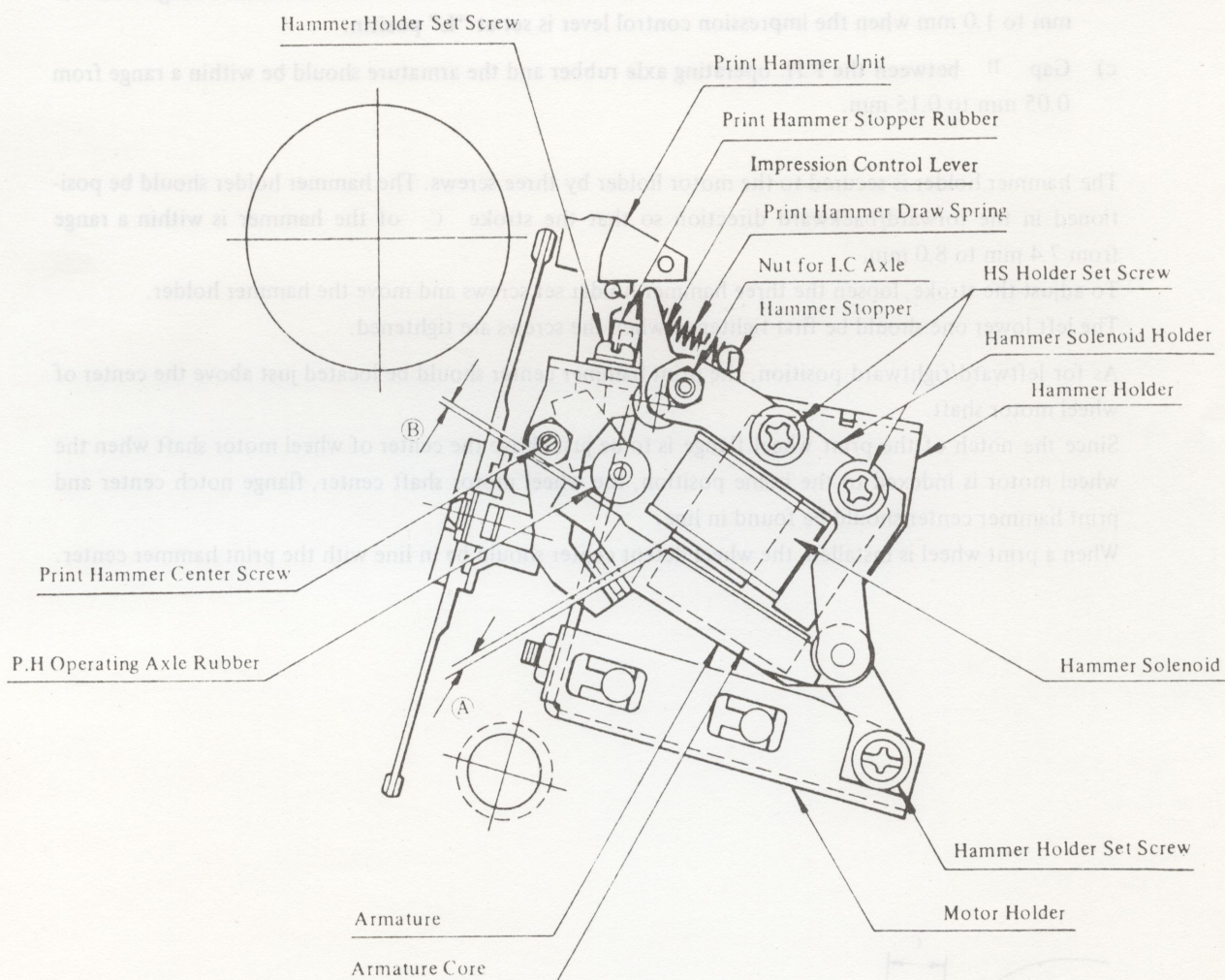
This adjustment can be made by loosening the home position actuator set screw and moving the actuator.



Print wheel flange position should be adjusted so that the notch in the flange is located just above the wheel motor shaft and the character “,” is found at the print position.

Adjustment of flange position in the shaft axial direction will be described later.

2) Print hammer



The print hammer is installed on the hammer holder by screws, and brought into action through the armature and P.H. operating axle rubber when the hammer solenoid fires.

The home position of the hammer is where the hammer stopper is in contact with the print hammer stopper rubber.

The hammer is always pulled backward by the print hammer spring.

Printing impact can be changed in two intensities for type of print wheel used, and governed by power of solenoid and relative positions between the print hammer and the armature, and the armature and the solenoid.

These relative positions are as follows:

- When the armature is pulled by the solenoid, the hammer solenoid surface should be fully in contact with the armature core surface without any gap.
- Gap $\textcircled{A}$ between the hammer solenoid and the armature core should be within a range from 0.9 mm to 1.0 mm when the impression control lever is set at "L" position.
- Gap $\textcircled{B}$ between the P.H. operating axle rubber and the armature should be within a range from 0.05 mm to 0.15 mm.

The hammer holder is secured to the motor holder by three screws. The hammer holder should be positioned in the forward/backward direction so that the stroke $\textcircled{C}$ of the hammer is within a range from 7.4 mm to 8.0 mm.

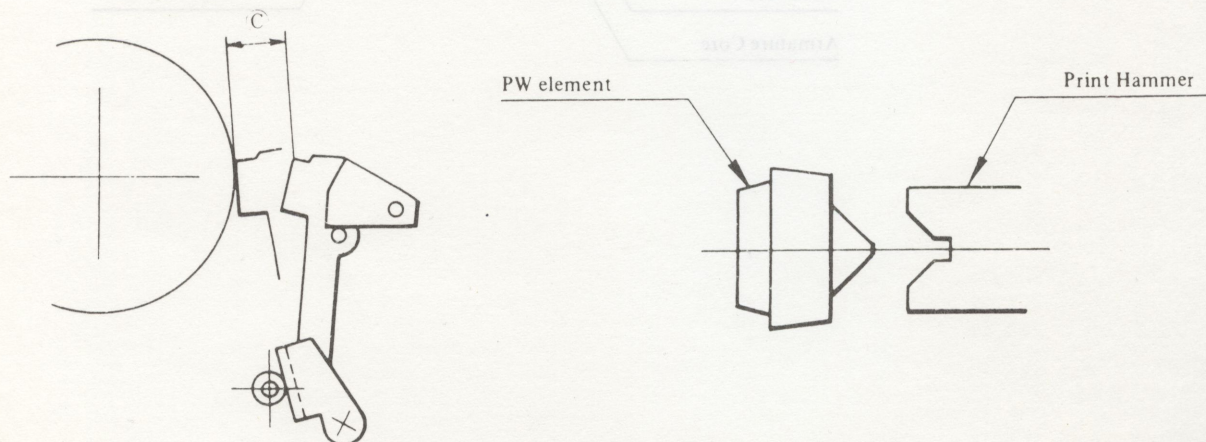
To adjust the stroke, loosen the three hammer holder set screws and move the hammer holder.

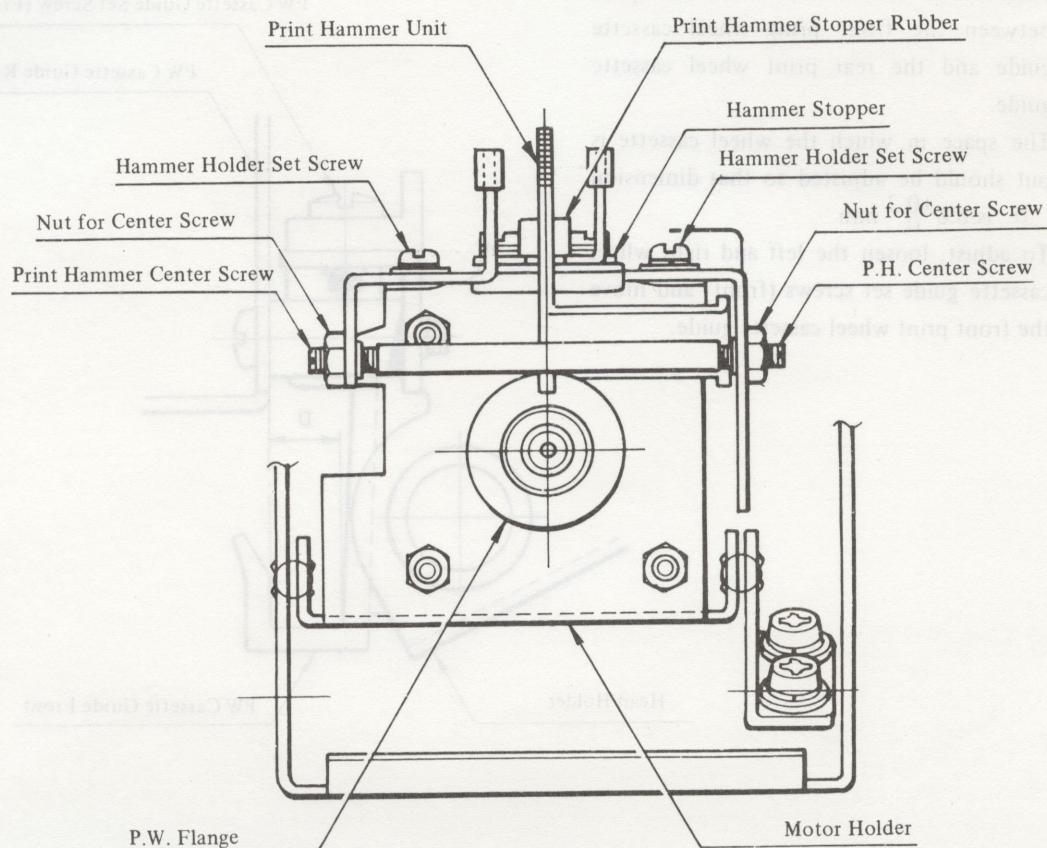
The left lower one should be first tightened when the screws are tightened.

As for leftward/rightward position, the print hammer center should be located just above the center of wheel motor shaft.

Since the notch of the print wheel flange is to be just above the center of wheel motor shaft when the wheel motor is indexed to the home position, the wheel motor shaft center, flange notch center and print hammer center should be found in line.

When a print wheel is installed, the wheel detent center should be in line with the print hammer center.





If hammer position is out of order, loosen the left and right print hammer center screw nuts and turn the print hammer center screw to adjust hammer position.

After the adjustment, remove the print hammer spring and make sure the print hammer has no play in lateral direction, and can move by its gravity.

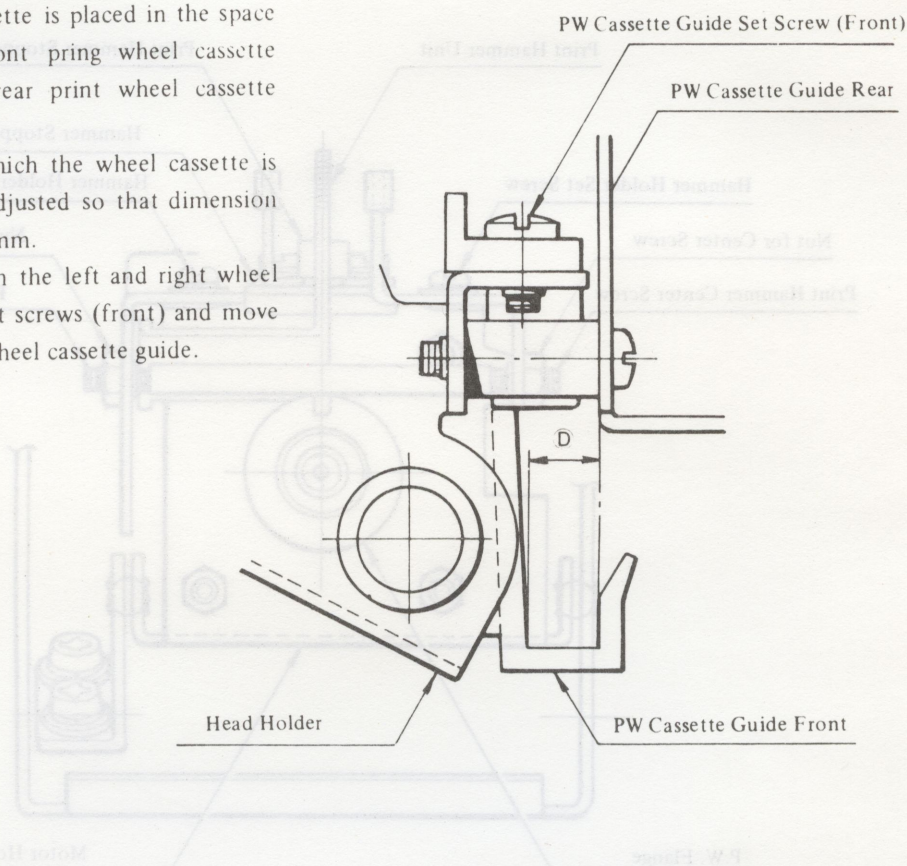
3) Positioning of print wheel

Print wheel cassette is placed in the space between the front print wheel cassette guide and the rear print wheel cassette guide.

The space in which the wheel cassette is put should be adjusted so that dimension

$$\textcircled{D} \text{ is } 6.6^{+0.3}_0 \text{ mm.}$$

To adjust, loosen the left and right wheel cassette guide set screws (front) and move the front print wheel cassette guide.

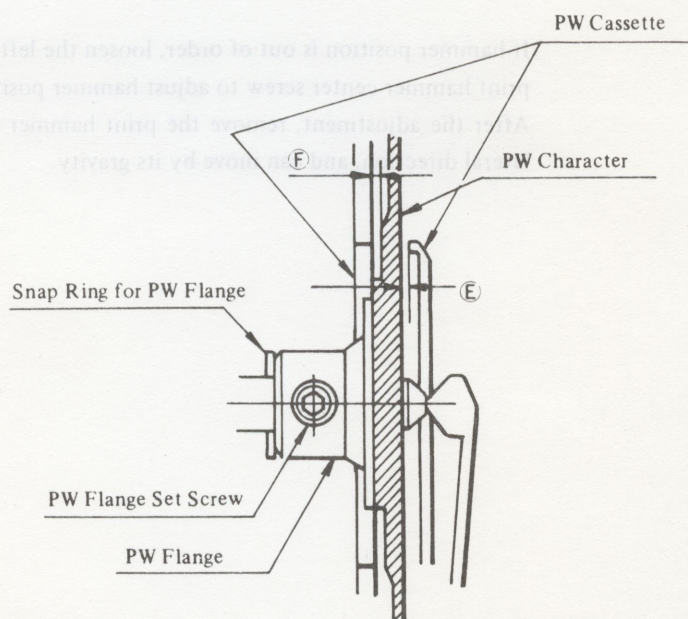


The position at which the print wheel is loaded depends on the position of the print wheel flange.

The print wheel flange should be installed so that gap $\textcircled{E}$ between the print wheel and the print wheel cassette can be maintained within a range from 0.3 mm to 0.5 mm. (Gap $\textcircled{F}$ should be within a range from 0.6 mm to 0.8 mm.)

To adjust the gap, loosen the flange set screw and move the flange and flange snap ring.

As previously mentioned, the flange must be adjusted in the rotating direction. In order to maintain gap $\textcircled{E}$ when the flange is adjusted in the rotating direction, the flange snap ring should be installed and it should be in contact with the flange.

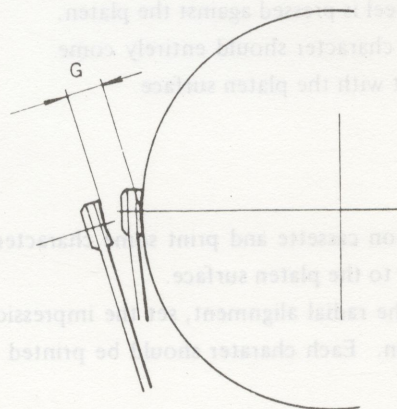


After the adjustment of print wheel position, the following checking should be accomplished.

- a) Gap ① between the platen and the print wheel should be 3.5 mm.

If the gap is not within 3.5 mm, move the head guide to adjust.

(Refer to the figure of wheel motor.)

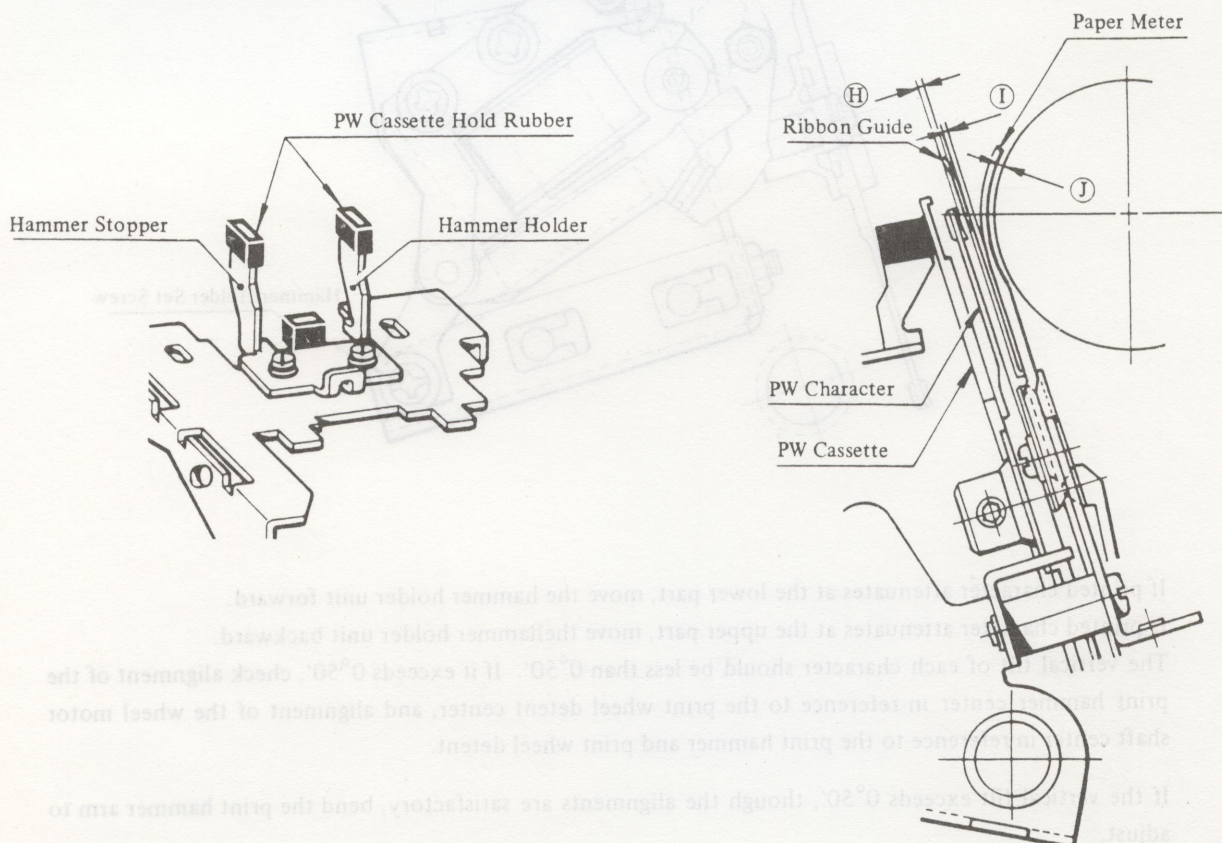


- b) Gap ② between the ribbon guide and the print wheel should be within a range from 0.2 mm to 0.6 mm.

Gap ③ between the ribbon guide and the paper meter and gap ④ between the paper meter and the platen should be within a range from 0.9 mm to 1.2 mm, and a range from 0.1 mm to 0.3 mm respectively.

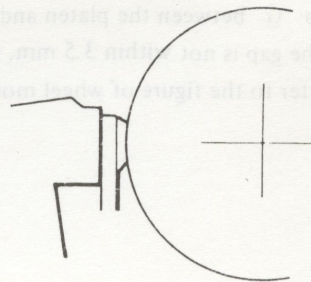
For adjustment of gap ④, refer to the description about paper meter. To adjust gap ③, bend the ribbon guide.

To adjust gap ②, bend the hammer stopper and hammer holder and slightly push forward or backward the print wheel cassette may be moved forward or backward within a range from 0.2 mm to 0.5 mm.



4) Adjustment of print wheel position

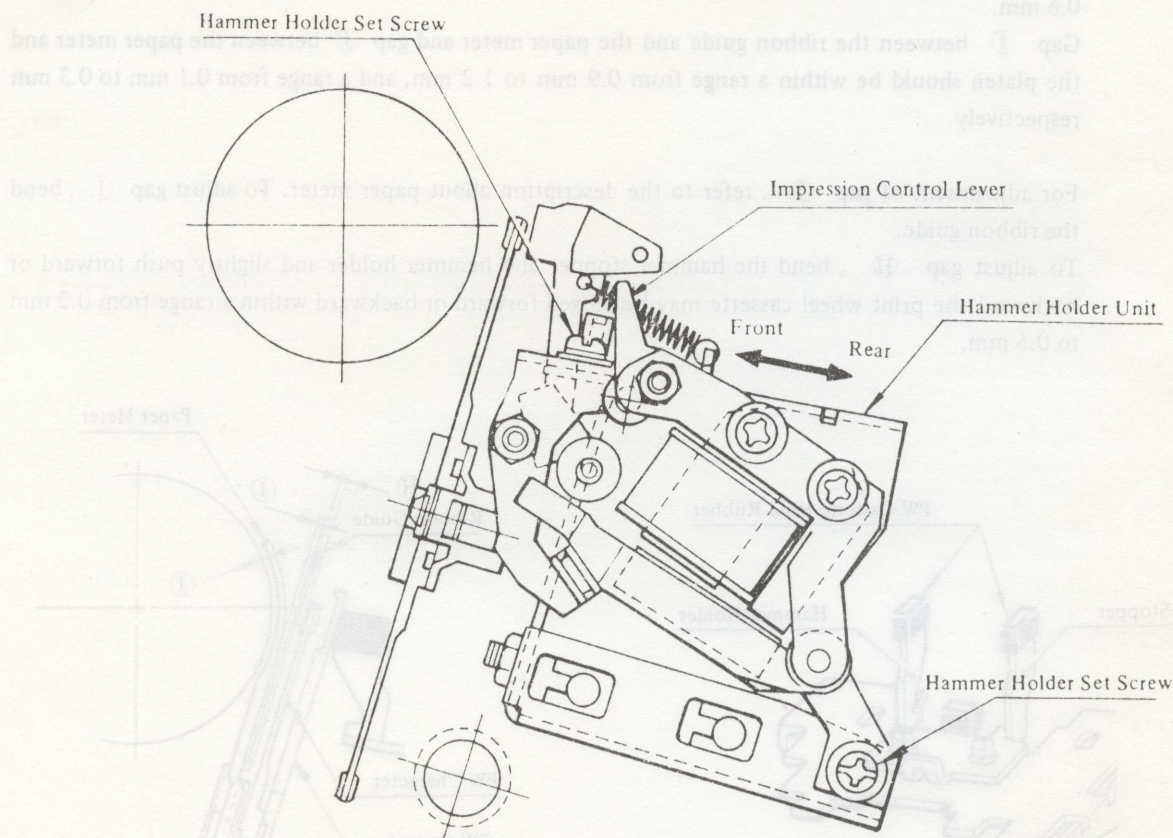
Adjustment of print wheel position in reference to platen when the print hammer is operated by hand so that character "H" of print wheel is pressed against the platen, the face of character should entirely come into contact with the platen surface.



Load a ribbon cassette and print some characters to check radial alignment and vertical tilt of character in reference to the platen surface.

To check the radial alignment, set the impression C lever to "L" position and print characters using a fabric ribbon. Each character should be printed with uniform density of ink in the vertical direction of character.

If ink density is not uniform, loosen three hammer holder set screws and move the hammer holder unit forward or backward to adjust.



If printed character attenuates at the lower part, move the hammer holder unit forward.

If printed character attenuates at the upper part, move the hammer holder unit backward.

The vertical tilt of each character should be less than $0^{\circ}50'$. If it exceeds $0^{\circ}50'$, check alignment of the print hammer center in reference to the print wheel detent center, and alignment of the wheel motor shaft center in reference to the print hammer and print wheel detent.

If the vertical tilt exceeds $0^{\circ}50'$, though the alignments are satisfactory, bend the print hammer arm to adjust.

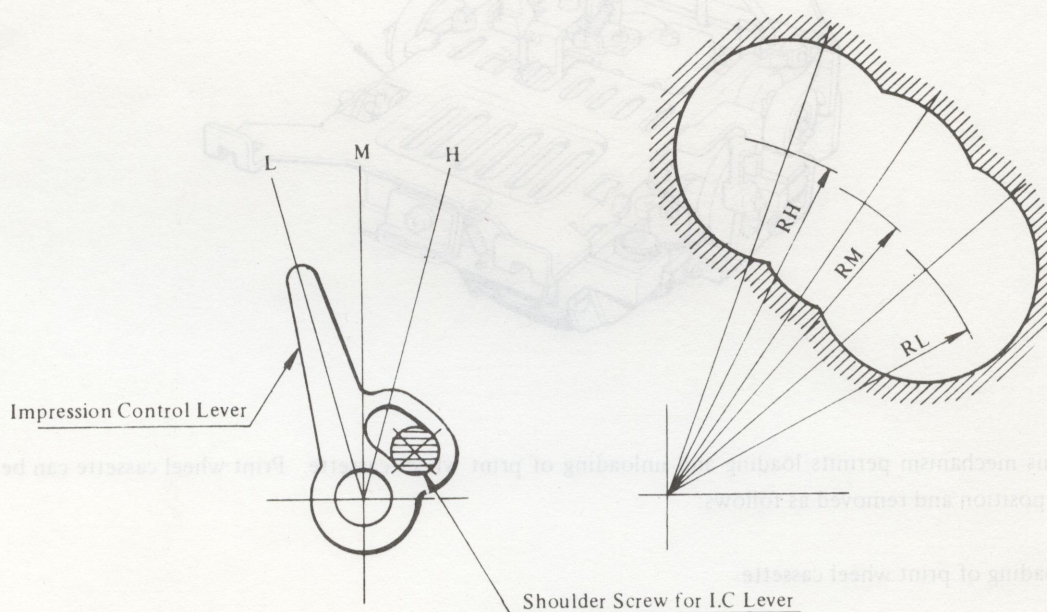
5) Impression control lever

The impression control lever is attached to the hammer holder, permitting adjustment of hammer impact in three intensities "L, M, H".

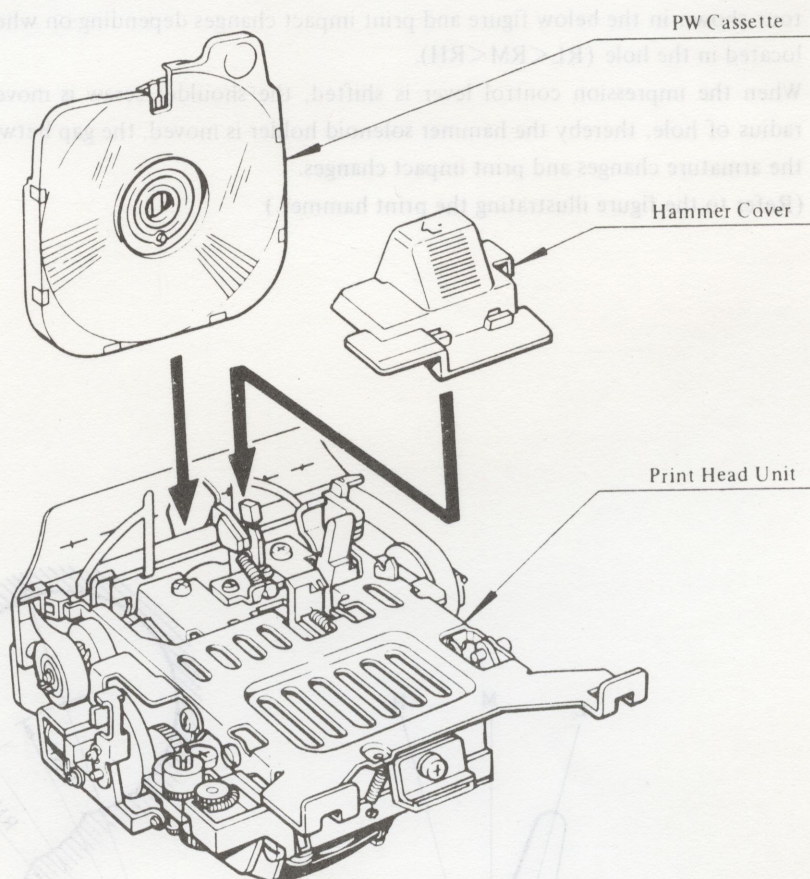
Impression control shoulder screw is set in the hole of impression control lever. The hole has the contour shown in the below figure and print impact changes depending on where the shoulder screw (pin) is located in the hole ($RL < RM < RH$).

When the impression control lever is shifted, the shoulder screw is moved by a distance equal to the radius of hole, thereby the hammer solenoid holder is moved, the gap between the hammer solenoid and the armature changes and print impact changes.

(Refer to the figure illustrating the print hammer.)



6) Print wheel cassette setting mechanism



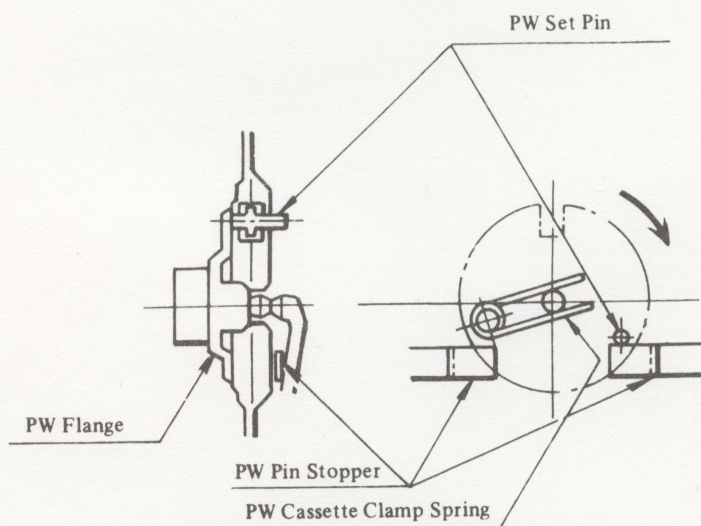
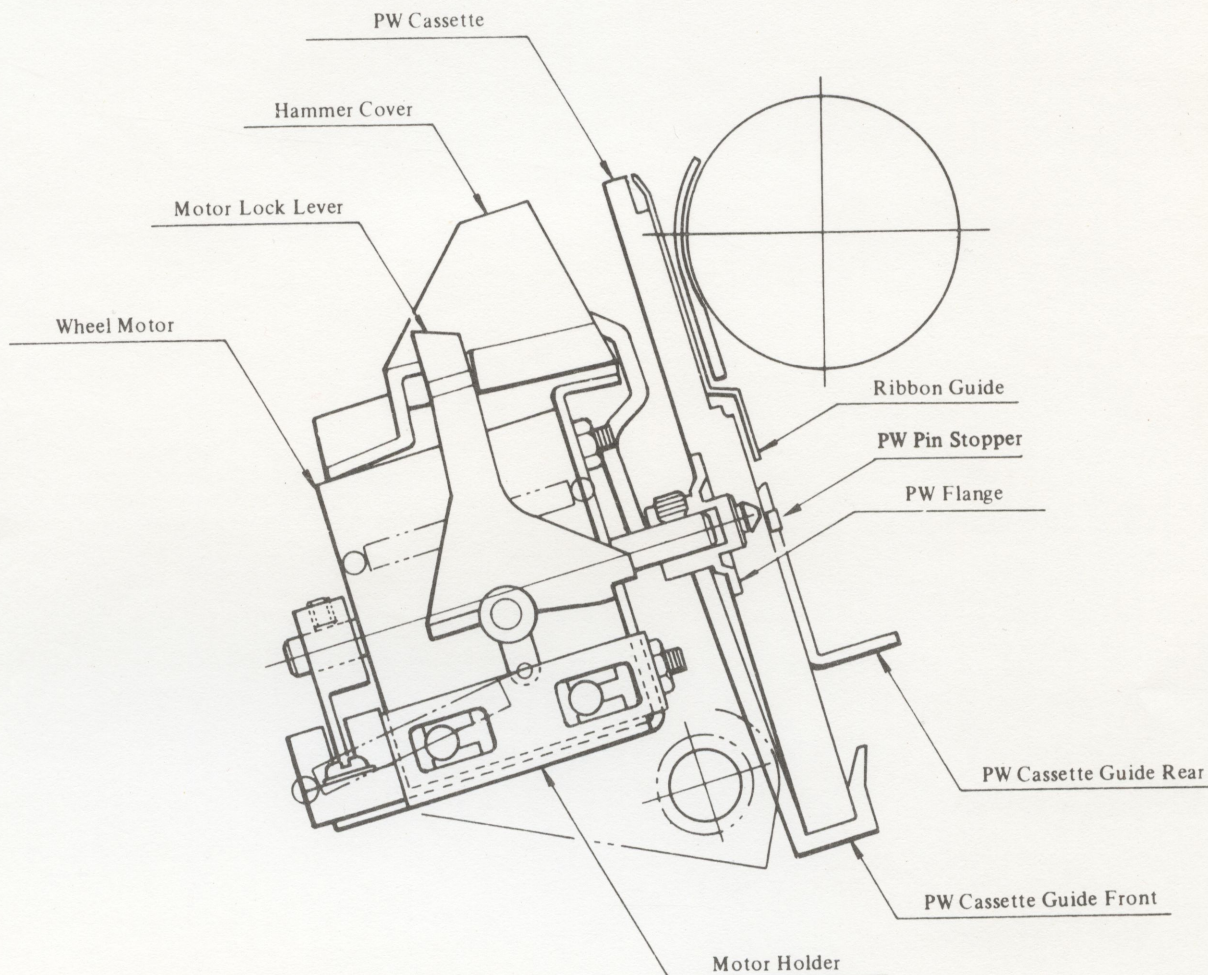
This mechanism permits loading and unloading of print wheel cassette. Print wheel cassette can be put in position and removed as follows:

Loading of print wheel cassette

- Put a print wheel cassette into the space between the front and rear print wheel cassette guides.
- Depress the hammer cover attached to the hammer holder toward the platen. The motor holder will move between the head holder and the motor holder guide toward the platen.
- The print wheel flange top will be pressed down in position by the print wheel cassette clamp spring and the cassette is engaged with the print wheel flange.
- The motor holder will be locked in position by the motor lock lever and the motor will be settled down.
- Each time the top cover is closed, or the power switch is turned on, the wheel motor starts rotating. The print wheel also rotates until the print wheel set pin strikes against the stopper of PW pin installed on the rear print wheel cassette guide. Thereafter only the wheel motor and print wheel flange goes on rotating.

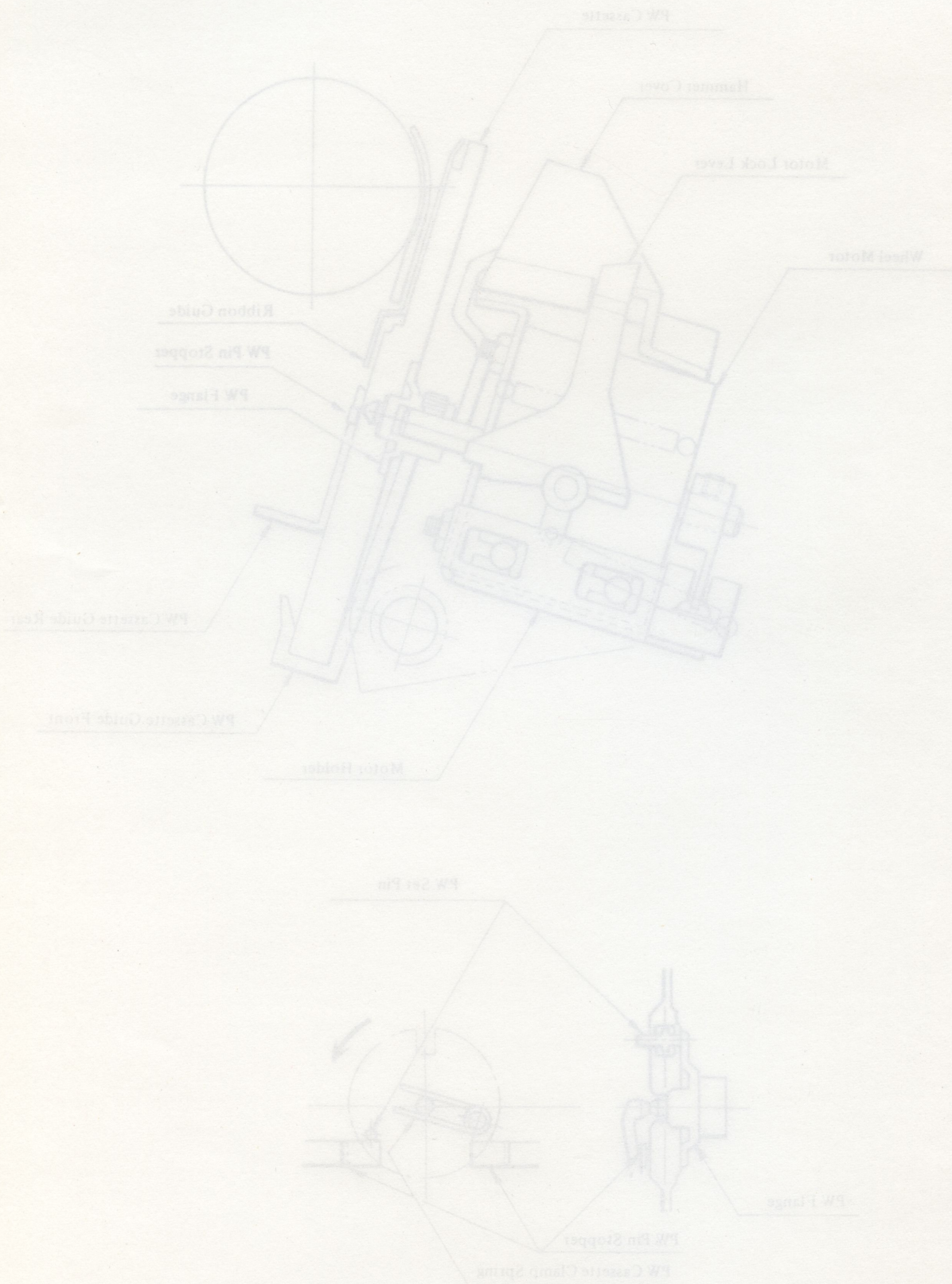
When the print wheel flange notch comes to the print wheel set pin position, the pin gets into the notch and the print wheel set pin retracts, thus permitting the print wheel to start rotating again with the print wheel flange.

When the print wheel set pin is engaged with the print wheel flange notch, the home position of wheel motor meets the home position of the print wheel and a desired (commanded) character is indexed.



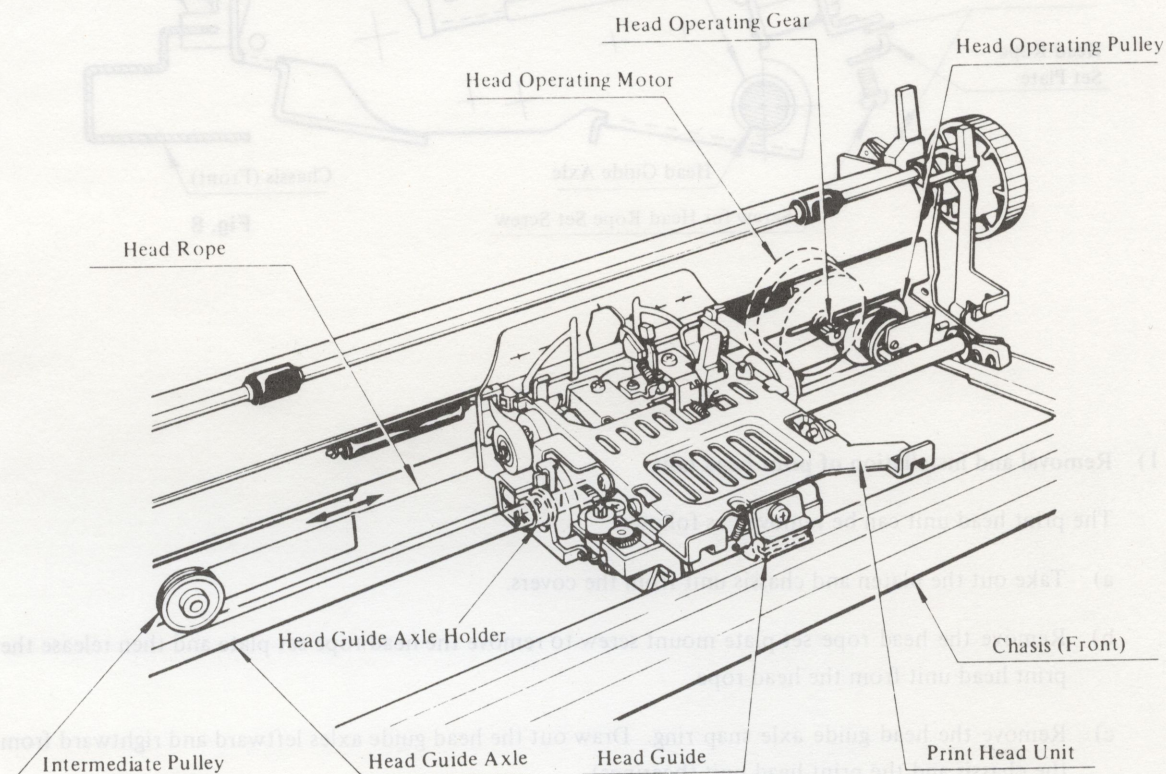
Unloading of print wheel cassette

- a) When the motor lock lever is pulled, the motor holder is unlocked, and slides toward the keyboard.
- b) When the motor holder slides, the print wheel is disengaged from the print wheel flange.
- c) Now the print wheel can be take out by lifting it, and replaced with other wheel.



6. Print head unit travel mechanism

The print head is driven for space bar escape, space, back space, return, tabulation, and the like, by the head operating motor.



The driving force is transmitted through the head operating gears and head operating pulleys.

Head rope is spanned between the left and right pulleys, and draws the print head unit for traversing.

Head guide axle holders (bearing) and head guide are secured to the head holder.

The head guide axle holders (bearing) are installed around the head guide axle and the head guide is engaged with the front chassis to support and guide the print head.

The head rope is secured to the head holder by the rear print wheel cassette guide and head rope set plate.

Therefore, the head holder, hence print head unit, traverses when the head operating pulley rotates.

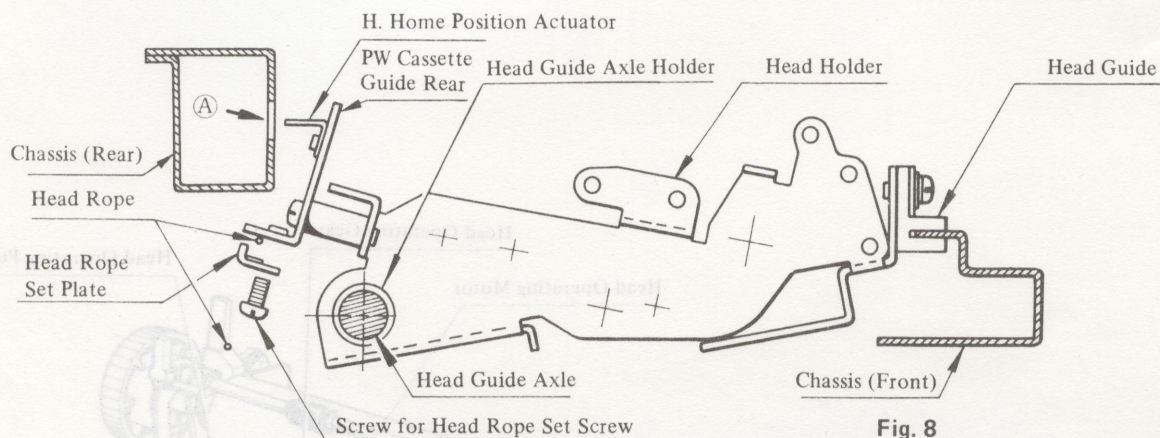


Fig. 8

1) Removal and installation of print head unit

The print head unit can be removed as follows:

- a) Take out the platen and chassis unit from the covers.
- b) Remove the head rope set plate mount screw to remove the head rope set plate and then release the print head unit from the head rope.
- c) Remove the head guide axle snap ring. Draw out the head guide axles leftward and rightward from the chassis and the print head unit (bearings).
- d) While lifting the print head unit, remove the head guide from the front chassis and take out the print head unit. The print head unit can be easily removed at this point by inserting head home position actuator into the hole (A) on the chassis (rear). (Fig. 8)

The print head unit can be installed again in the inverse steps to the removing procedure. In the installation, however, care should be taken to secure the head rope to the print head unit as follows:

The print head unit can be installed again in the inverse steps to the removing procedure. In the installation, however, care should be taken to secure the head rope to the print head unit as follows:

- Rotate the head operating pulley so that the upper head rope is twined $3/4$ turn around the head operating pulley to assure synchronized CD phase excitation of the head operating motor. (Use a checker described later as for adjusting of head home position.)
- Move the print head unit leftward to the end, and at this position, secure the head rope to the print head unit by the head rope set screw.
- The head rope should be secured on the corrugated portion of head rope set plate in good alignment.

After the print head unit has been installed, adjustment of head home position, described later, should be made.

Note: Since the rope once clamped by the head rope set plate is flattened where it is clamped, be sure to clamp the same flattened portion when the rope is secured again.

2) Removal and installation of head rope

The head rope can be removed as follows:

- Remove the chassis unit from the covers.
- Release the head rope from the print head unit.
- Remove the head pulley cover (L).
- Loosen the pulley axle nut, slide the intermediate pulley (counter-drive side) and its axle in the slotted hole to the right extremity of the hole and remove the head rope from the intermediate pulley.
- Remove the head rope from the head operating pulley (drive side).

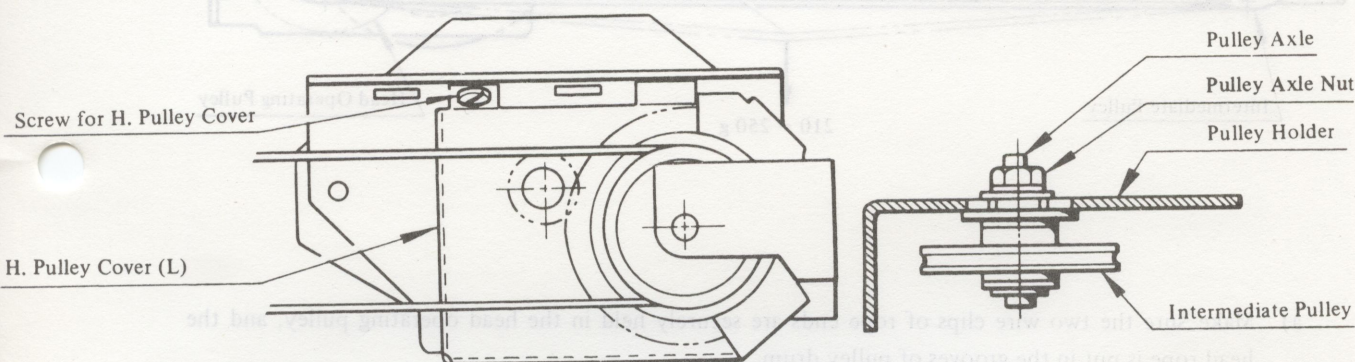


Fig. 9

The head rope can be installed again in the inverse steps to the removing procedure.

- Install the head rope to the head operating pulley.

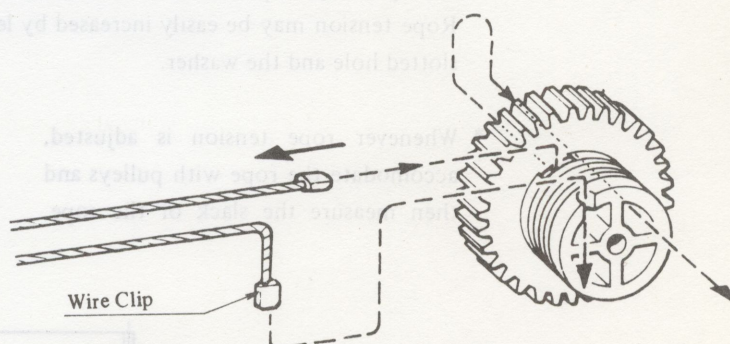
To install, put one end of the head rope into the outside circumference hole on the drum side, lead it out from the gap between the head operating pulley holder and the head operating pulley.

And then pass it through the round hole of the rear side of the head operating pulley and pull it out to the other side.

Now the rope has been secured at its one end.

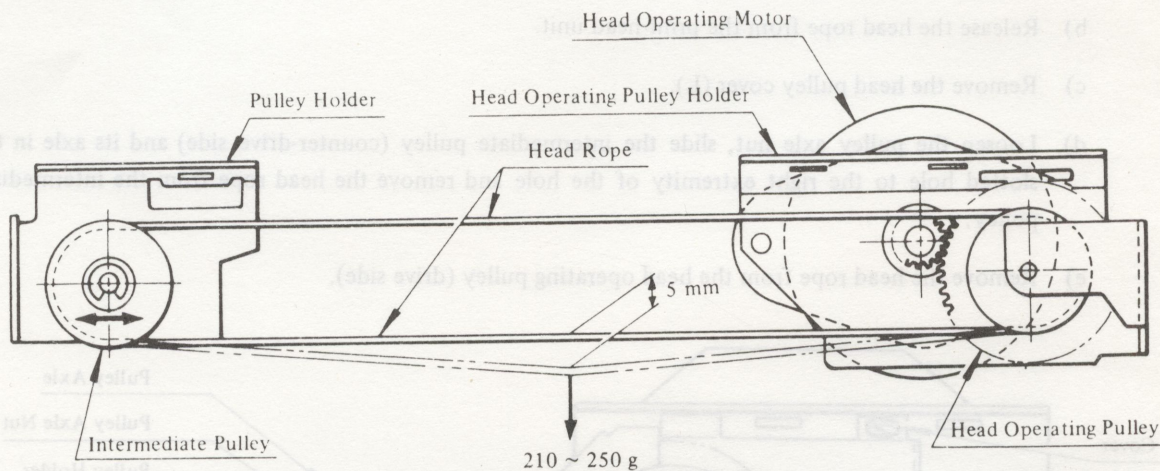
Twine the head rope around the intermediate pulley and wind around the head operating pulley drum, and put the other end of the rope into a groove on the drum side and pull it.

The rope will be secured at its both ends by each wire clip.



- Slide the intermediate pulley in the slotted hole leftward to given a suitable tension to the rope.

3) Adjustment of head rope tension.

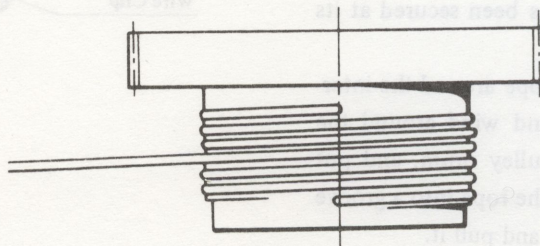


- Make sure the two wire clips of rope ends are securely held in the head operating pulley, and the head rope is put in the grooves of pulley drum.
- In order to accommodate the head rope to the pulley drum, pull the rope left and rightward until the head operating pulley no longer rotates (repeat this operation two or three times).
- Rotate the head operating pulley to adjust the upper head rope position so that it leaves the drum surface at the center of drum width.
- Check the rope tension by exerting a load to the lower head rope at the center of the span. Slack caused by a load of 210 ~ 250 g should be 5 mm.

To adjust rope tension, move the intermediate pulley leftward or rightward.

Rope tension may be easily increased by levering the pulley with a screwdriver plunged between the slotted hole and the washer.

- * Whenever rope tension is adjusted, accommodate the rope with pulleys and then measure the slack of the rope.



Head rope located at the center of drum width

4) Adjustment of head home position

Use a checker (CH60) designed to be exclusively used in this adjustment.

The checker has → key, ← key, reset key, phase (A, B, C, D) indicators and LEDs.

The adjustment procedure is as follows:

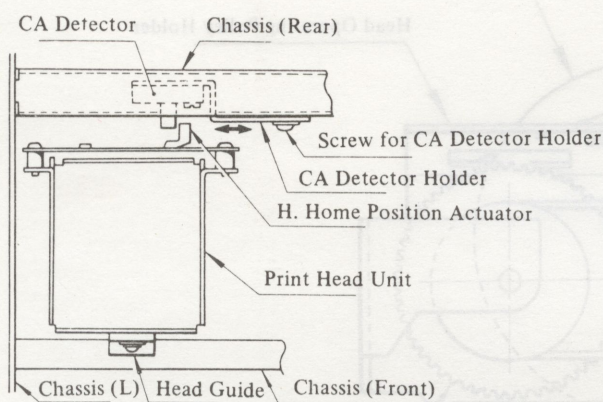


Fig. 11

- a) Connect the carriage detector connector, the power supply harness and the head operating motor connector to the checker.
- b) Move the print head unit to the left end.
- c) Press the ← key and excite the head operating motor in the C-D phase (head rope fixed position).
- d) Press the → key and excite the head operating motor in the second A-B phase (press the → key 12 times).

At this point, loosen the screw for the CA detector holder, move the CA detector holder and adjust so that the LED lights up.

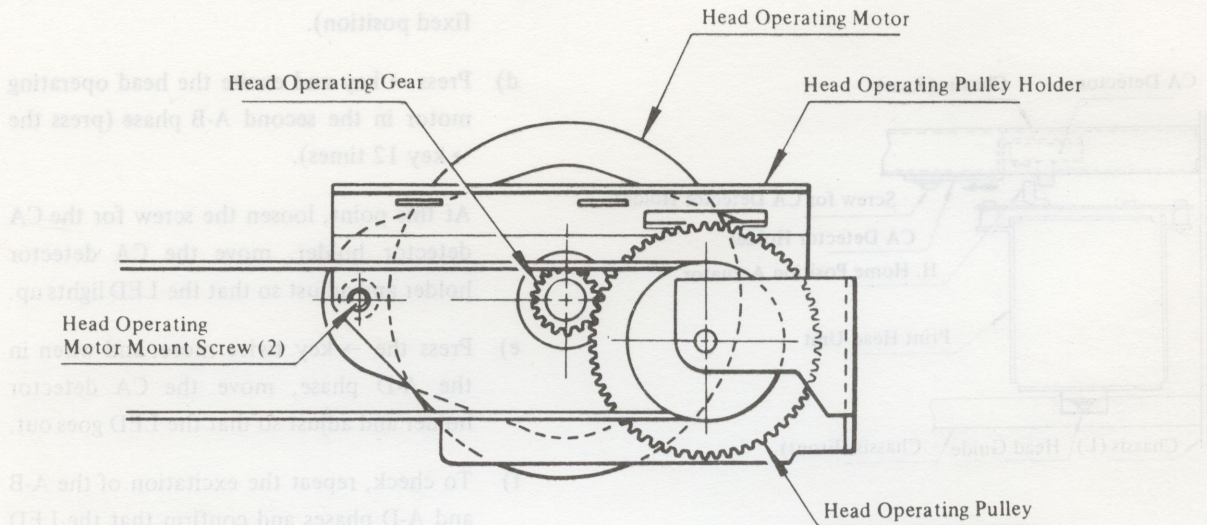
- e) Press the → key twice more, and when in the A-D phase, move the CA detector holder and adjust so that the LED goes out.
- f) To check, repeat the excitation of the A-B and A-D phases and confirm that the LED lights up and goes out.

There is no problem even if the LED goes out at the position of the A-phase during this process.

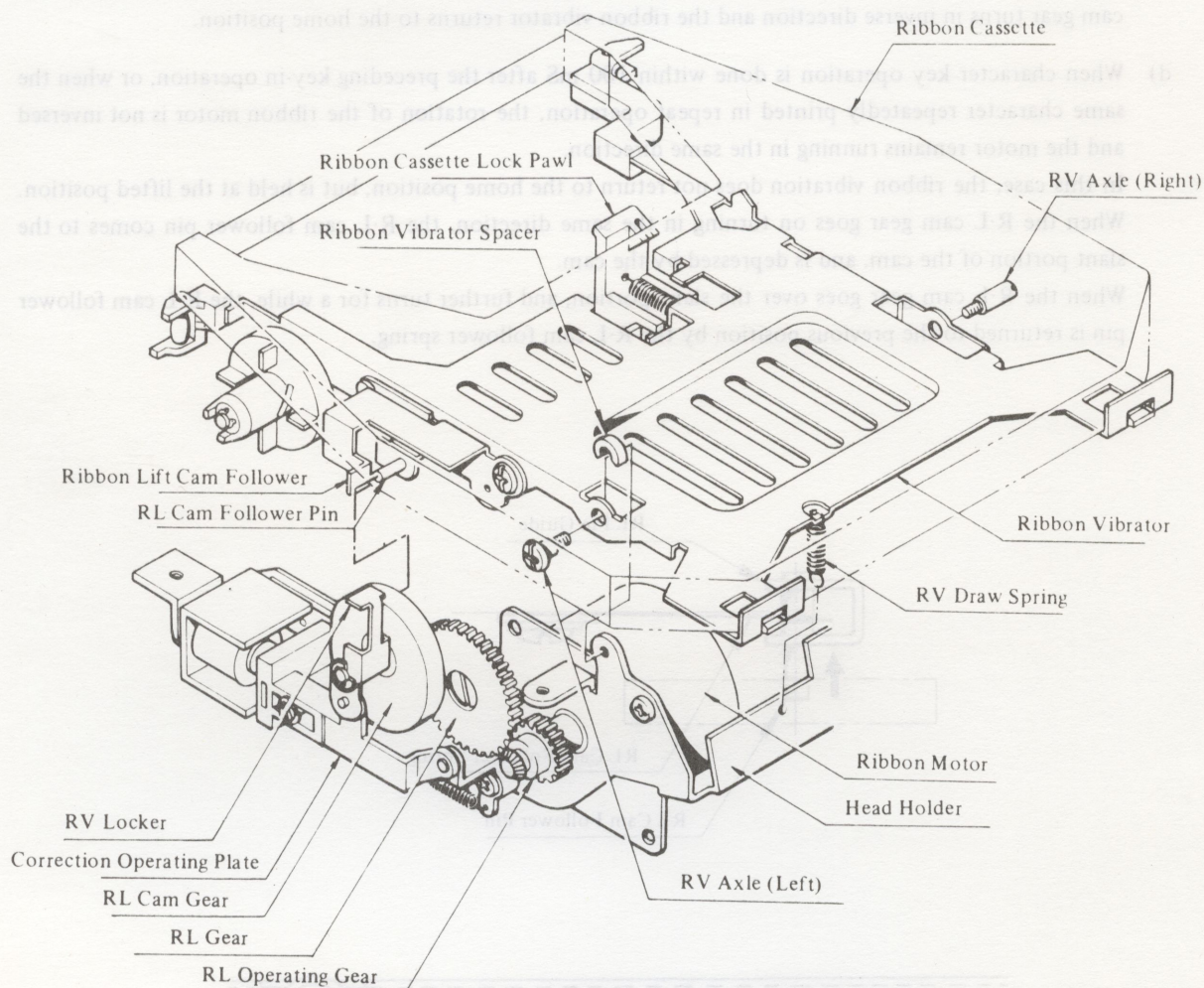
*For detailed information, see CH-60 OPERATION MANUAL.

5) Adjustment of backlash

Adjust the backlash between the head operating gear and the head operating pulley gear to 0 ~ 0.03 mm by loosening the head operating motor mount screw and vertically moving the head operating motor.



7. Ribbon lift mechanism



Ribbon cassette is placed on the ribbon vibrator, and secured in position at the left and right slots, and by the ribbon cassette lock pawl. Therefore, the ribbon cassette is subjected to vibrations generated by the ribbon vibrator.

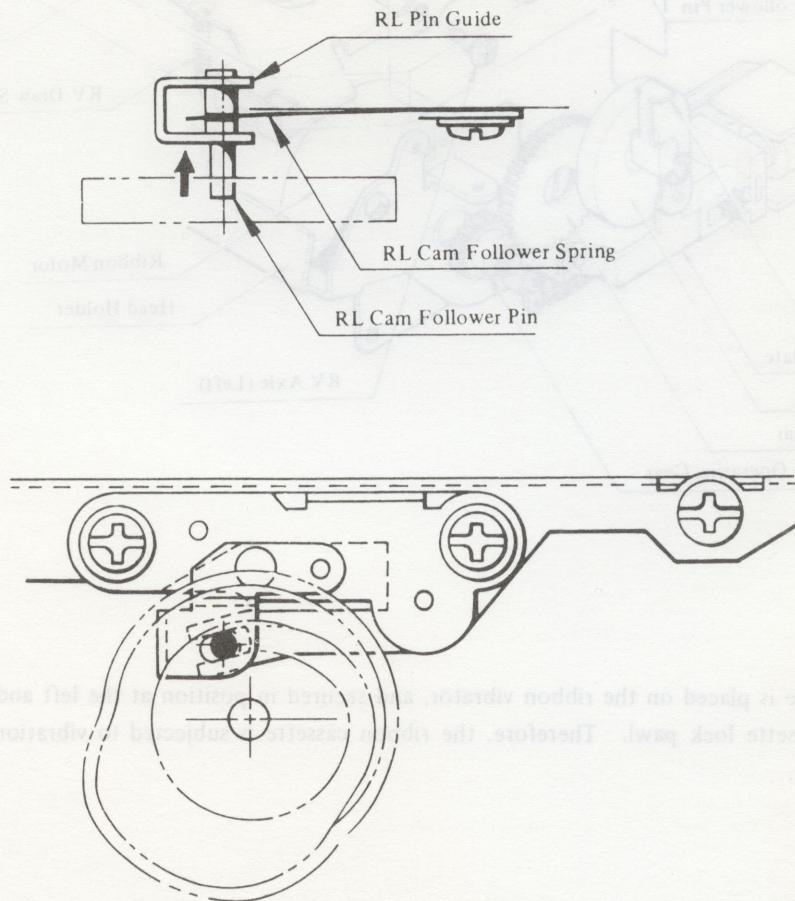
The ribbon vibrator is driven by the ribbon motor and its principle and operation are as follows:

- a) The R·L cam gear is turned by the ribbon motor through the R·L operating gear installed on the ribbon motor shaft, and the R·L gear.
- b) When the R·L cam gear turns, the R·L cam follower pin rises along the profile of the R·L cam, and lifts the ribbon vibrator until the R·L cam follower strikes against the R·V locker.
- c) After any character is printed, the direction of rotation of the ribbon motor is inverted, thereby the R·L cam gear turns in inverse direction and the ribbon vibrator returns to the home position.
- d) When character key operation is done within 100 mS after the preceding key-in operation, or when the same character repeatedly printed in repeat operation, the rotation of the ribbon motor is not inverted and the motor remains running in the same direction.

In this case, the ribbon vibration does not return to the home position, but is held at the lifted position.

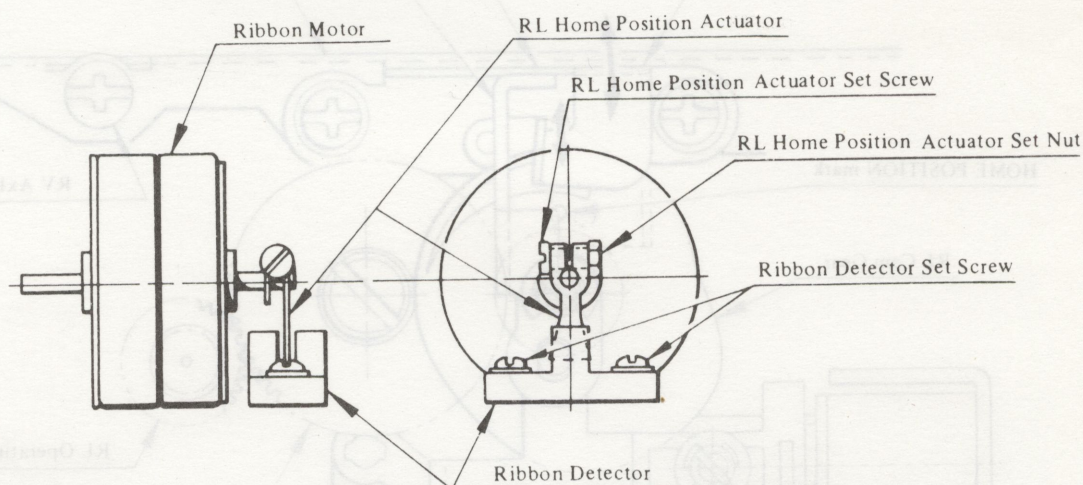
When the R·L cam gear goes on turning in the same direction, the R·L cam follower pin comes to the slant portion of the cam, and is depressed by the cam.

When the R·L cam gear goes over the slant portion, and further turns for a while, the R·L cam follower pin is returned to the previous position by the R·L cam follower spring.



1) Adjustment of home positions of ribbon motor and cam

The R-L home position actuator is installed to the ribbon motor shaft. The ribbon motor home position (predetermined stop position of motor shaft) is governed by the actuator and the ribbon detector. The ribbon motor home position corresponds to the home position of the R-L cam gear and the home position of the ribbon vibrator (ribbon down position) as well.



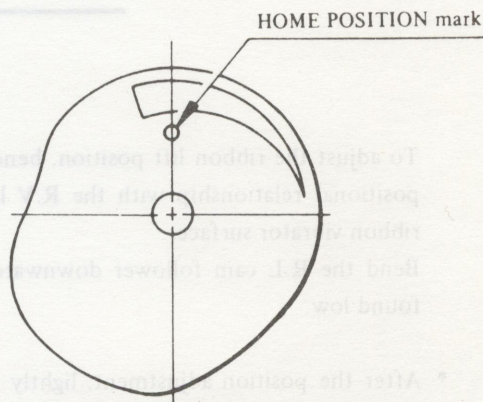
When the ribbon motor starts and stops, the R-L home position actuator should be found at the center of ribbon detector slit.

To adjust, loosen the R-L home position actuator set screw and nut and move the actuator.

When the ribbon motor stops with its shaft at the home position, the "Home Position" mark on the R-L cam gear should be found just above the R-L cam gear axle. (For detail, refer to the description about adjustment of ribbon lift mechanism)

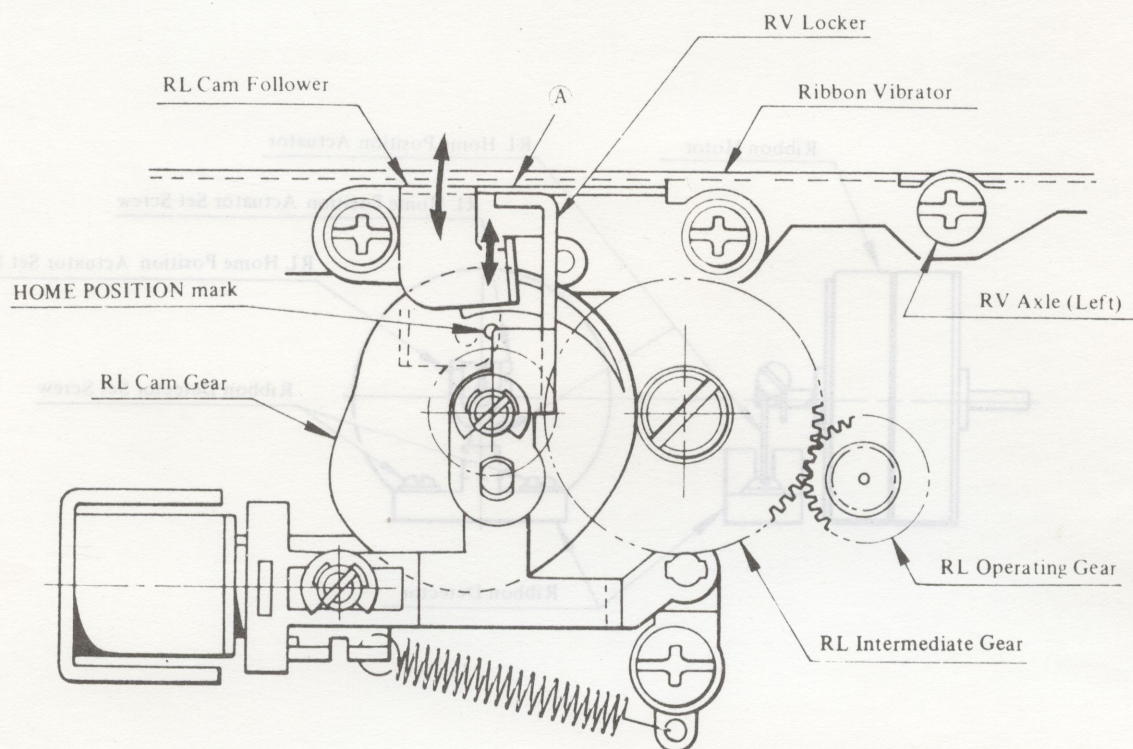
Since the ribbon vibrator is installed at $16^{\circ}30'$ in reference to the chassis, the "Home Position" mark should be angled at $16^{\circ}30'$ toward the keyboard.

To adjust, remove the R-V locker snap ring and the R-V locker and change the meshing of the R-L cam gear with the R-L gear.



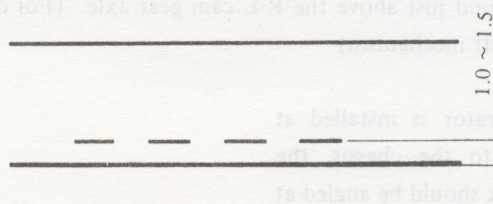
2) Adjustment of ribbon lift mechanism

The ribbon vibrator goes on working and stops when the R·L cam follower strikes the R·V locker. Therefore, ribbon lift position can be adjusted by changing the relative position between the R·L cam follower and the R·V locker.



To check the ribbon lift position, load a carbon ribbon and print “ ” (underline) to see where the underline is located in the carbon ribbon.

The underline should be located within a range from 1.0 mm to 1.5 mm measured from the lower edge of ribbon.



To adjust the ribbon lift position, bend the R·V cam follower at part ①, using care not to change the positional relationship with the R·V locker, and not to allow the R·L cam follower to extend over ribbon vibrator surface.

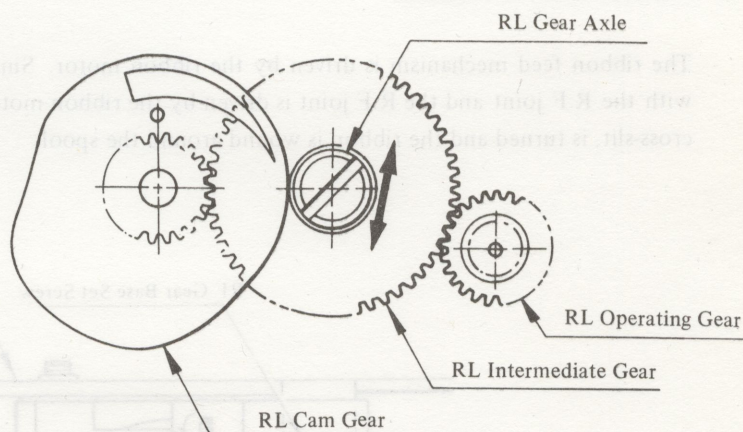
Bend the R·L cam follower downward when the printed underline is found high, and upward when found low.

- * After the position adjustment, lightly depress the ribbon vibrator with the cam follower engaged with the R·V locker to make sure a suitable play exists on the lock part.

3) Adjustment of backlashes

The backlashes between the R.L cam gear and the R.L intermediate gear, and the R.L operating gear should be within a range from 0.05 mm to 0.2 mm.

To adjust the backlashes, loosen the R.L gear axle and nut and move the R.L gear (intermediate gear).



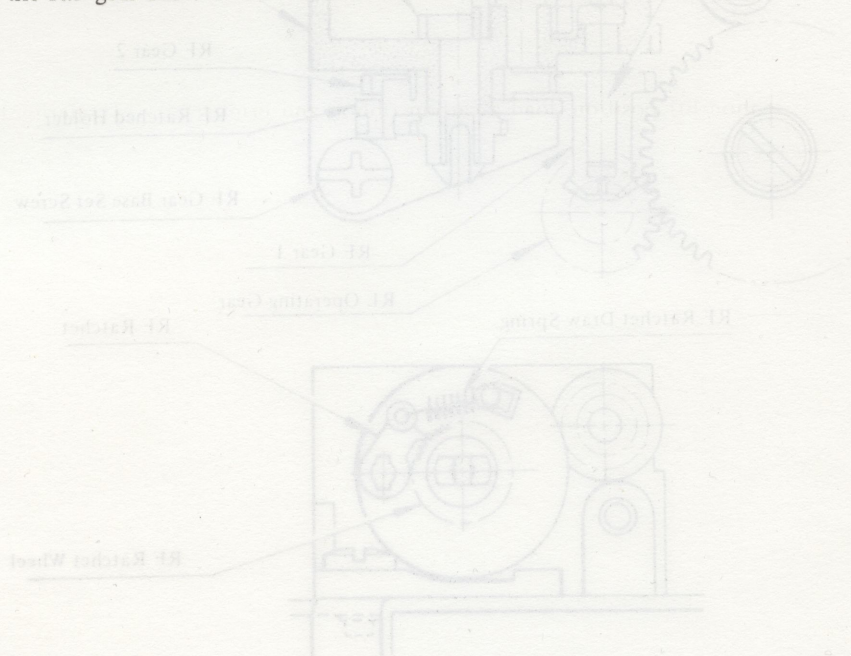
4) Removal and installation of ribbon vibrator unit

Remove the R.F gear 4 from its base (refer to the figure illustrating the ribbon feed mechanism).

The ribbon vibrator unit can be removed by taking out the left and right ribbon vibrator axles and R.V. draw springs. The unit is removed together with the ribbon vibrator spacer. Use care not to lose the spacer.

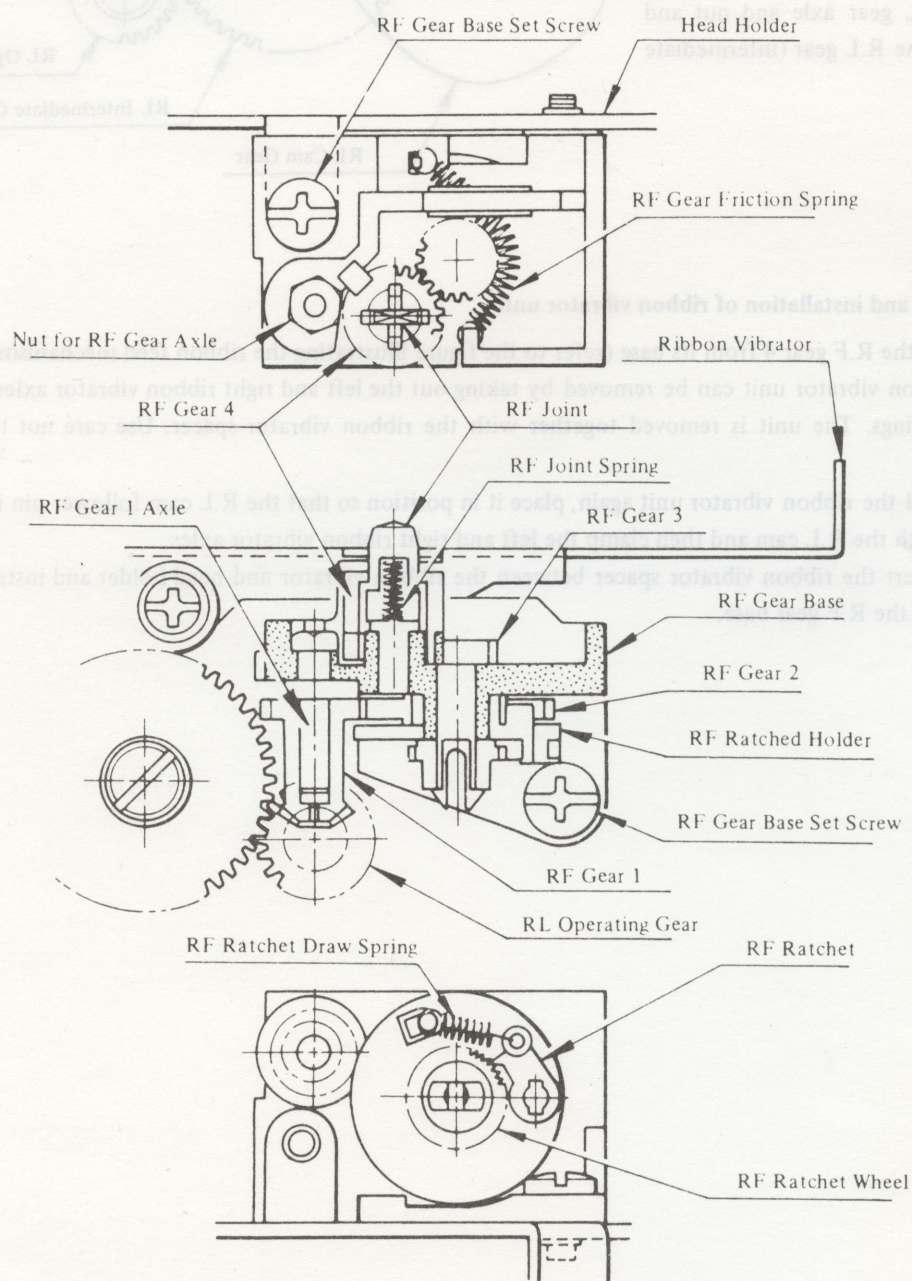
To install the ribbon vibrator unit again, place it in position so that the R.L cam follower pin is accommodated with the R.L cam and then clamp the left and right ribbon vibrator axles.

Then insert the ribbon vibrator spacer between the ribbon vibrator and head holder and install the R.F gear 4 to the R.F gear base.



8. Ribbon feed mechanism

The ribbon feed mechanism is driven by the ribbon motor. Since the cross-slit of ribbon cassette is engaged with the R.F joint and the R.F joint is driven by the ribbon motor, the spool in the cassette, which bears the cross-slit, is turned and the ribbon is wound around the spool.



The rotation of the ribbon motor is transmitted to the R.F ratchet holder through the R.L operating gear, R.F gear 1 and R.F gear 2.

The R.F ratchet holder has R.F ratchet engaged with the R.F ratchet wheel by spring. The ratchet allows the R.F ratchet wheel to turn only in one direction.

The rotation of the R.F ratchet wheel is then transmitted to the R.F joint through the R.F gear 3 and R.F gear 4.

When the ribbon motor rotates in inverse direction, the R.F ratchet is disengaged from the R.F ratchet wheel and the ratchet wheel is braked by the R.F. gear friction spring that is in contact with the R.F gear 3, so that the ratchet wheel cannot rotate in inverse direction.

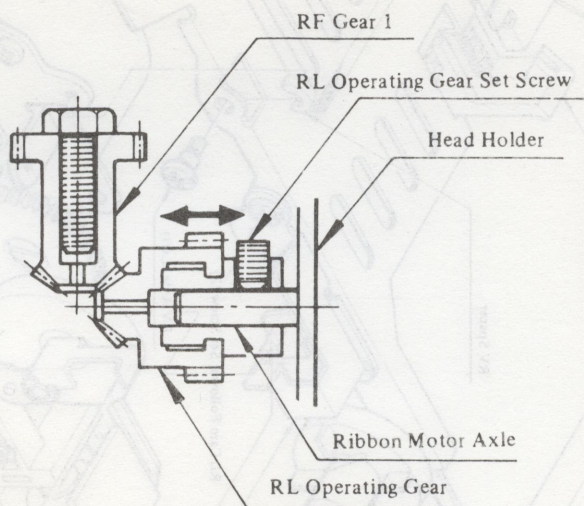
As mentioned previously, the R.F joint is put into the cross-slit of ribbon cassette for rotation of ribbon spool.

However, it is likely that the R.F joint is not put into the cross-slit when a ribbon cassette is loaded. In this case, the R.F joint is under pressure of the ribbon cassette and the R.f joint is under pressure of the ribbon cassette and the R.F joint can be entered into the cross-slit by turning the knob of cassette so that the cross-slit meets the R.F joint.

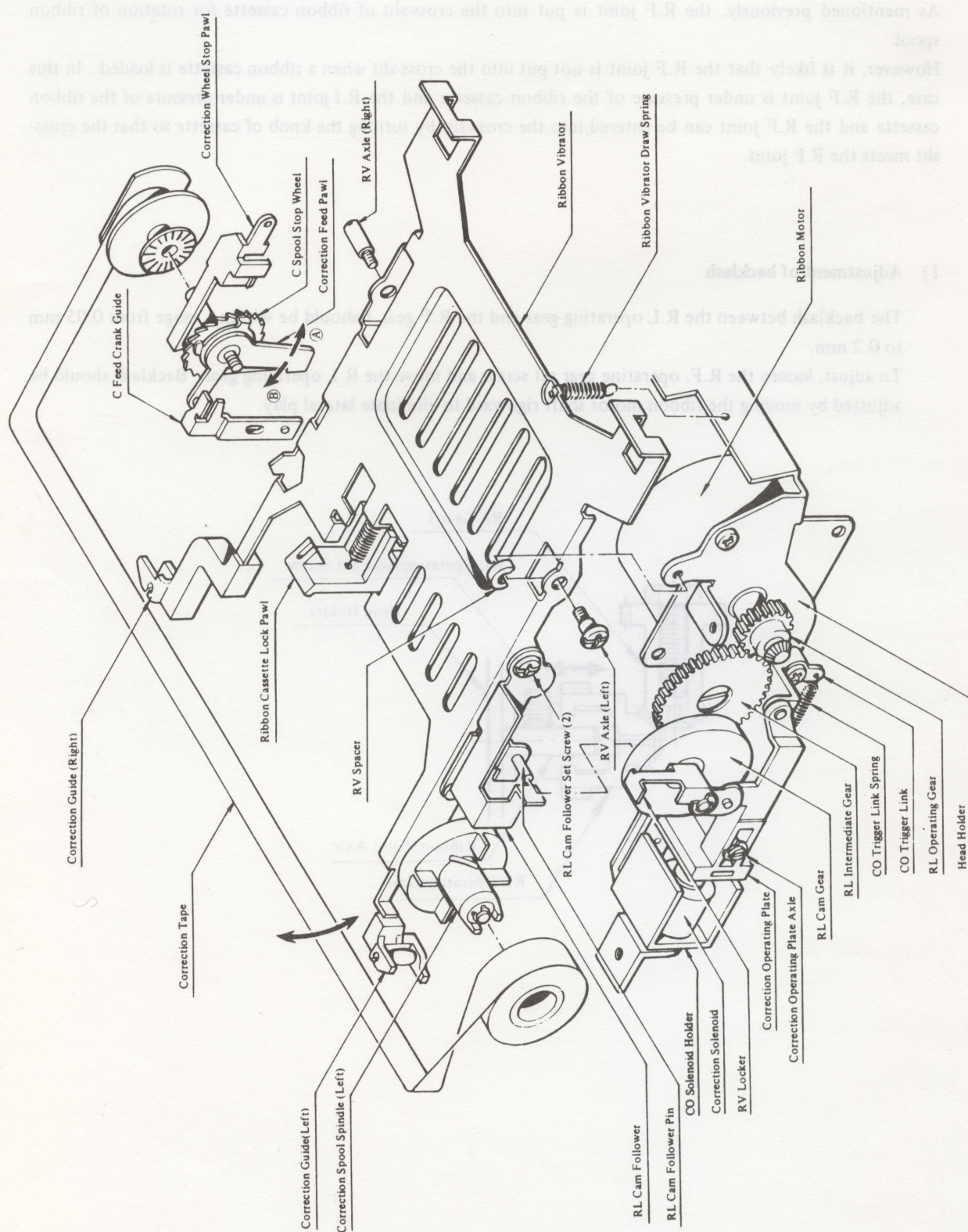
1) Adjustment of backlash

The backlash between the R.L operating gear and the R.F gear 1 should be within a range from 0.05 mm to 0.2 mm.

To adjust, loosen the R.F. operating gear set screw and move the R.L operating gear. Backlash should be adjusted by moving the ribbon motor shaft rightward to eliminate lateral play.



9. Correction mechanism



The correction tape is spanned between the left correction spool spindle installed on the ribbon vibrator, and the correction spool stop wheel, and guided by the left and right correction guides also installed on the ribbon vibrator.

Therefore, the collection tape is fed by the ribbon vibrator.

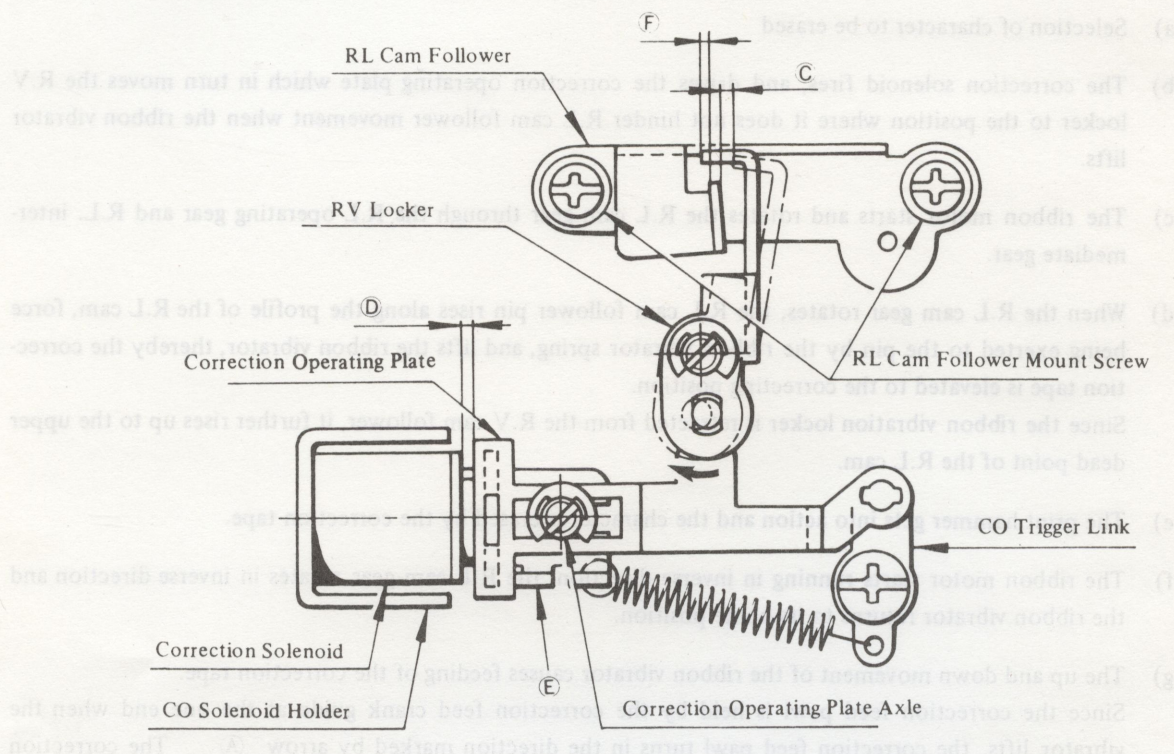
The operation of the correction mechanism is as follows:

- a) Selection of character to be erased
- b) The correction solenoid fires, and drives the correction operating plate which in turn moves the R.V locker to the position where it does not hinder R.L cam follower movement when the ribbon vibrator lifts.
- c) The ribbon motor starts and rotates the R.L cam gear through the R.L operating gear and R.L. intermediate gear.
- d) When the R.L cam gear rotates, the R.L cam follower pin rises along the profile of the R.L cam, force being exerted to the pin by the ribbon vibrator spring, and lifts the ribbon vibrator, thereby the correction tape is elevated to the correcting position.
Since the ribbon vibration locker is retracted from the R.V cam follower, it further rises up to the upper dead point of the R.L cam.
- e) The print hammer gets into action and the character is erased by the correction tape.
- f) The ribbon motor starts running in inverse direction, the R.L cam gear rotates in inverse direction and the ribbon vibrator returns to its home position.
- g) The up and down movement of the ribbon vibrator causes feeding of the correction tape.
Since the correction feed pawl is held by the correction feed crank guide at the one end when the vibrator lifts, the correction feed pawl turns in the direction marked by arrow ①. The correction spool stop wheel is stopped by the correction wheel pawl and therefore only the correction feed pawl rotates step by step.
When the ribbon vibrator moves downward, the correction feed pawl turns in the direction marked by arrow ②, and lets rotate the correction spool wheel by one tooth.
The correction spool wheel is engaged with the correction wheel stop pawl when the wheel rotates one step (one tooth), thus advances one step the correction tape.

1) Adjustment of correction mechanism

When the correction operating plate is moved by hand to make it in contact with the correction solenoid, gap ③ between the R.L cam follower and the ribbon vibration locker should be within a range from 0.5 mm to 1.0 mm.

To adjust, loosen the correction operating plate axle and move the correction solenoid holder.



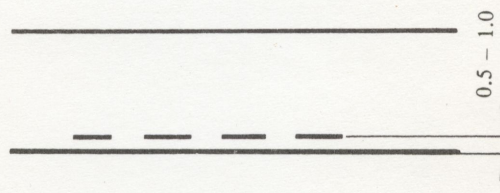
The movable range ④ of the correction operating plate should be within a range from 0.8 mm to 1.2 mm.

To adjust the movable range, bend part ⑤ of correction solenoid.

In the adjustment, make sure dimension ⑥ between the R.L cam follower and the R.V locker is shorter than 0.5 mm.

To check the lifted position of the correction tape, erase previously printed "___" (underline) using a lift-off correction tape. In the checking, the underline should be erased at a position within 0.5 mm to 1.0 mm measured from the lower edge of the lift-off tape.

To adjust, loosen the R.L cam follower set screw and move the cam follower vertically.

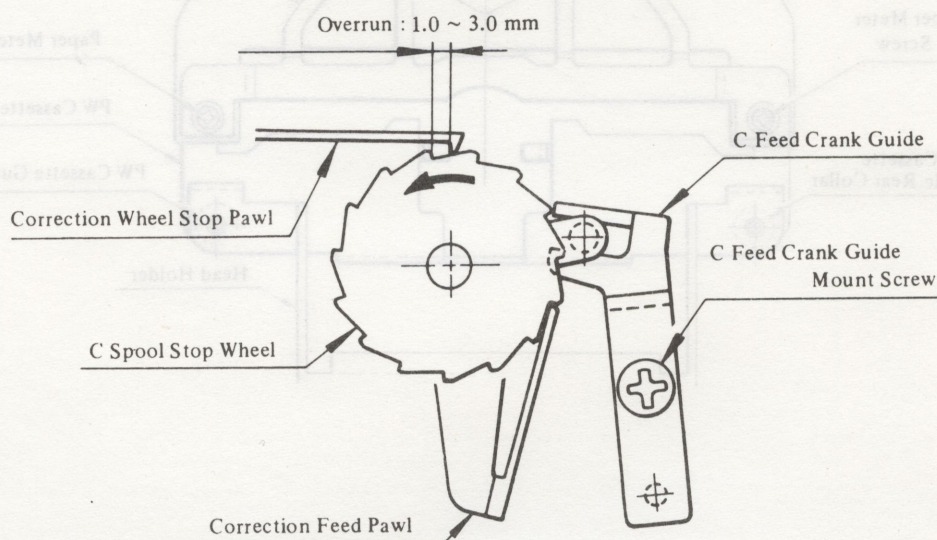


Note : Since the lifted position of correction ribbon changes when the R.L cam follower position is changed, check the lifted position after the above-mentioned adjustment.

2) Adjustment of correction tape feed

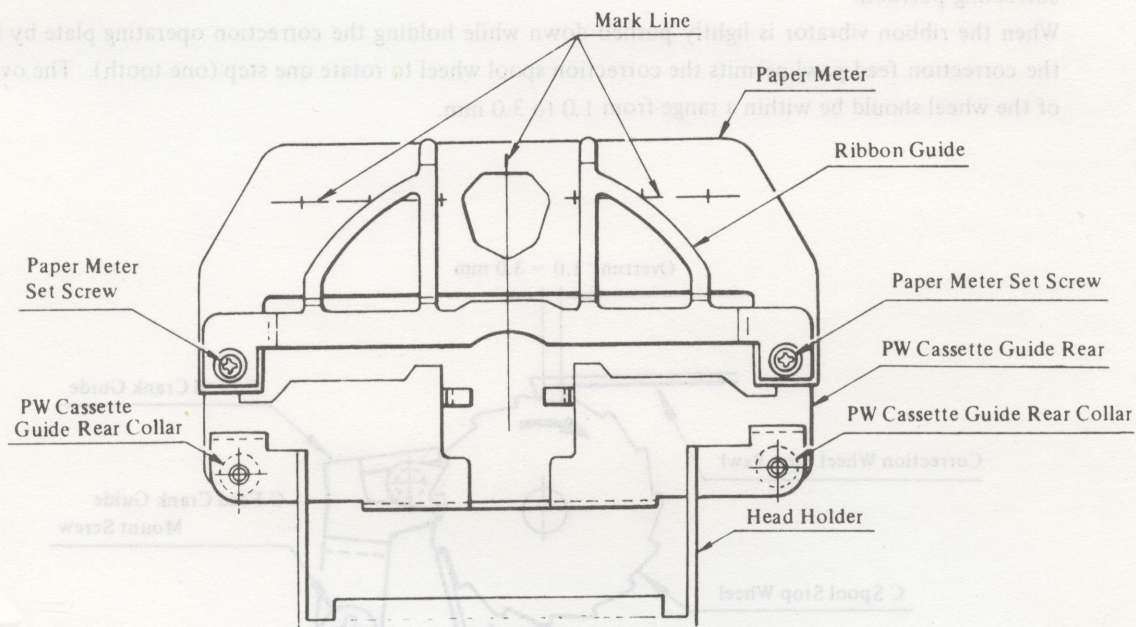
Move the correction operating plate by hand to retract the R.V locker from the R.L cam follower (dimension ⑤ in the preceding figure) and turn the R.L cam gear to locate the ribbon vibrator to the correcting position.

When the ribbon vibrator is lightly pushed down while holding the correction operating plate by hand, the correction feed pawl permits the correction spool wheel to rotate one step (one tooth). The overrun of the wheel should be within a range from 1.0 to 3.0 mm.

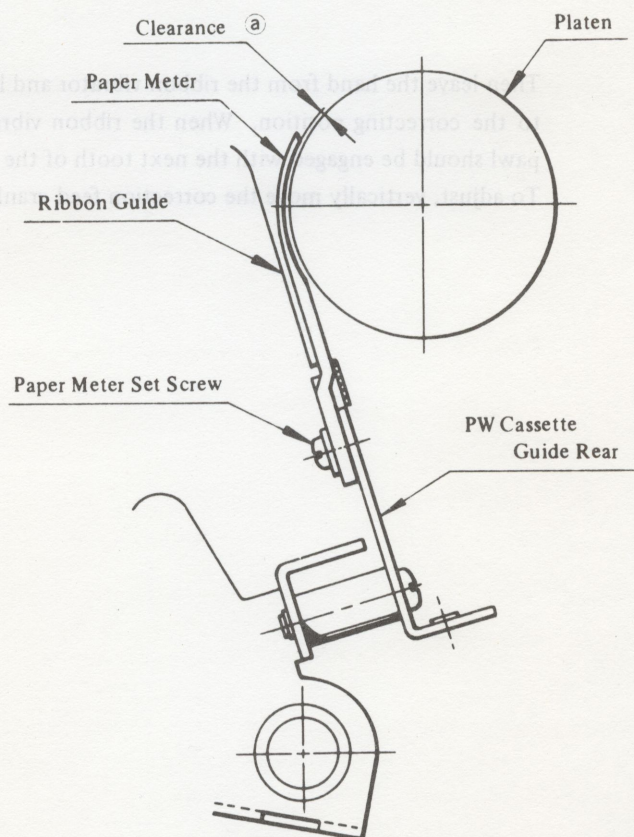


Then leave the hand from the ribbon vibrator and let the ribbon vibrator spring move the ribbon vibrator to the correcting position. When the ribbon vibrator is at the correcting position, the correction feed pawl should be engaged with the next tooth of the correction spool stop wheel. To adjust, vertically move the correction feed crank guide.

10. Paper meter

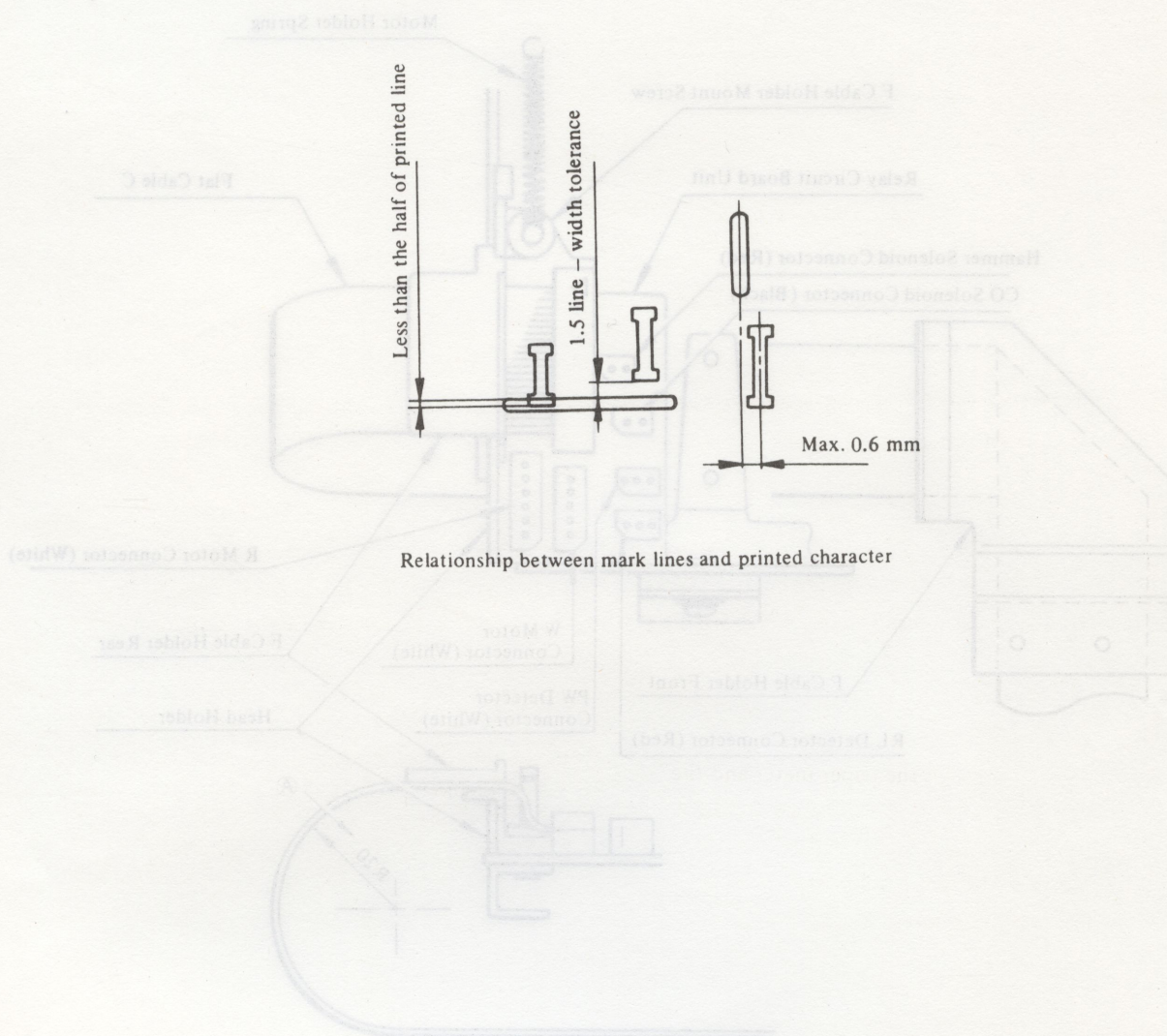


- a) Gap ① between the paper meter and the platen should be within a range from 0.1 mm to 0.3 mm. To adjust the gap, bend the rear print wheel cassette guide properly.



- b) The mark lines on the paper meter should be placed within the specified tolerances in reference to printed character (character "I").

To adjust, loosen the paper meter set screw and move the paper meter.

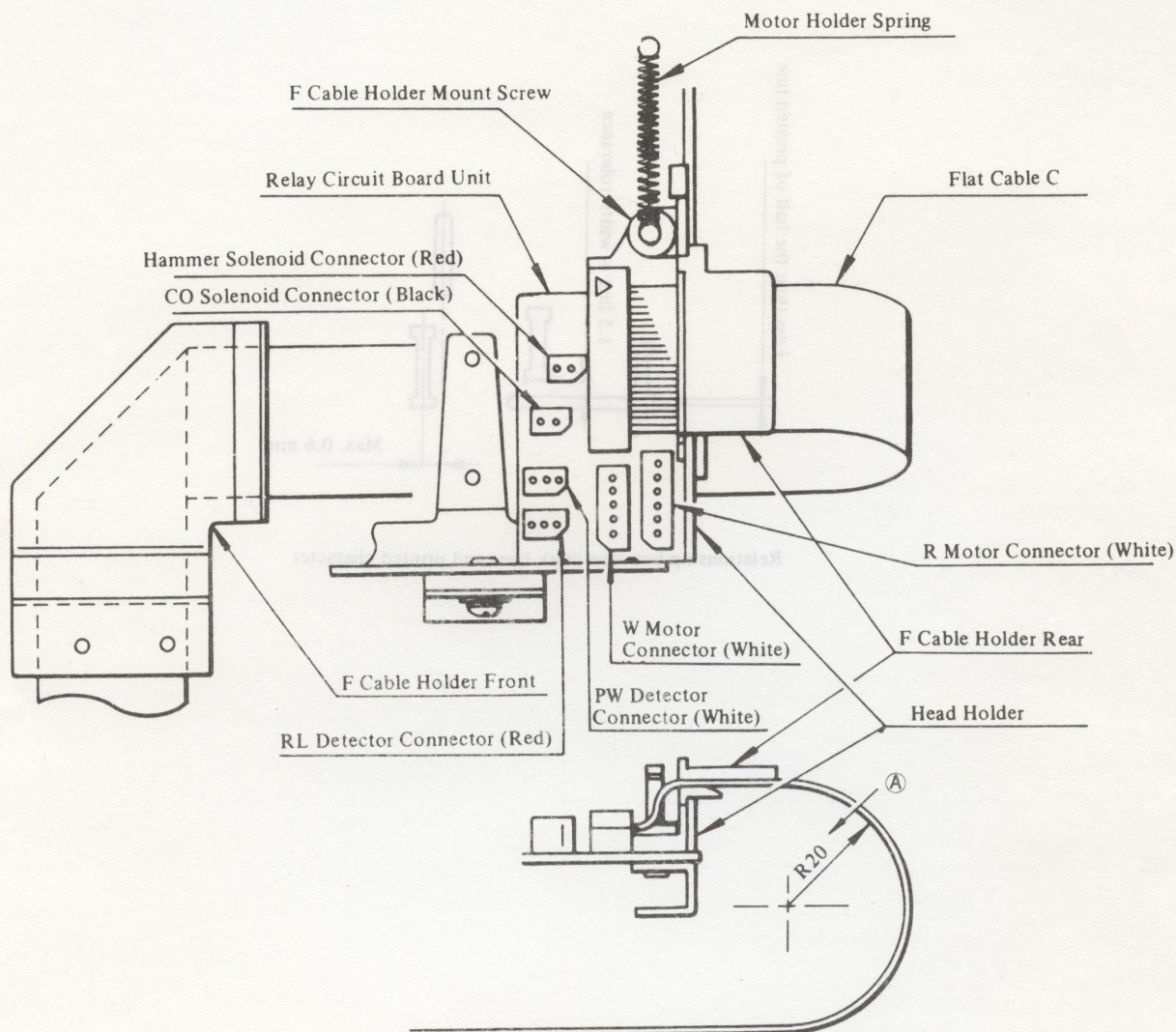


1) Removal and installation of relay circuit unit

Remove the upper cover and disconnect the flat cable C connector from the control circuit board. Detach the left and right chassis M rubbers from the front part of the chassis and lift the chassis unit. While holding up the chassis unit, pass the flat cable C connector under the chassis and take it out from the front F cable holder. Remove the left and right ribbon vibrator axes, and then the ribbon vibrator unit from the head holder. Disconnect all connectors from the relay circuit board unit and remove the motor lever spring from the rear F cable holder. Remove the F cable holder mount screw, rear F cable holder and the relay circuit board from the groove of head holder.

11. Relay circuit board unit

The relay circuit board (including flat cable C) should be installed to the head holder together with the rear F cable holder as shown below.



1) Removal and installation of relay circuit unit

Remove the upper cover and disconnect the flat cable C connector from the control circuit board. Detach the left and right chassis M rubbers from the front part of the chassis and lift the chassis unit. While holding up the chassis unit, pass the flat cable C connector under the chassis and take it out from the front F cable holder. Remove the left and right ribbon vibrator axes, and then the ribbon vibrator unit from the head holder.

Disconnect all connectors from the relay circuit board unit and remove the motor lever spring from the rear F cable holder.

Remove the F cable holder mount screw, rear F cable holder and the relay circuit board from the grooves of head holder.

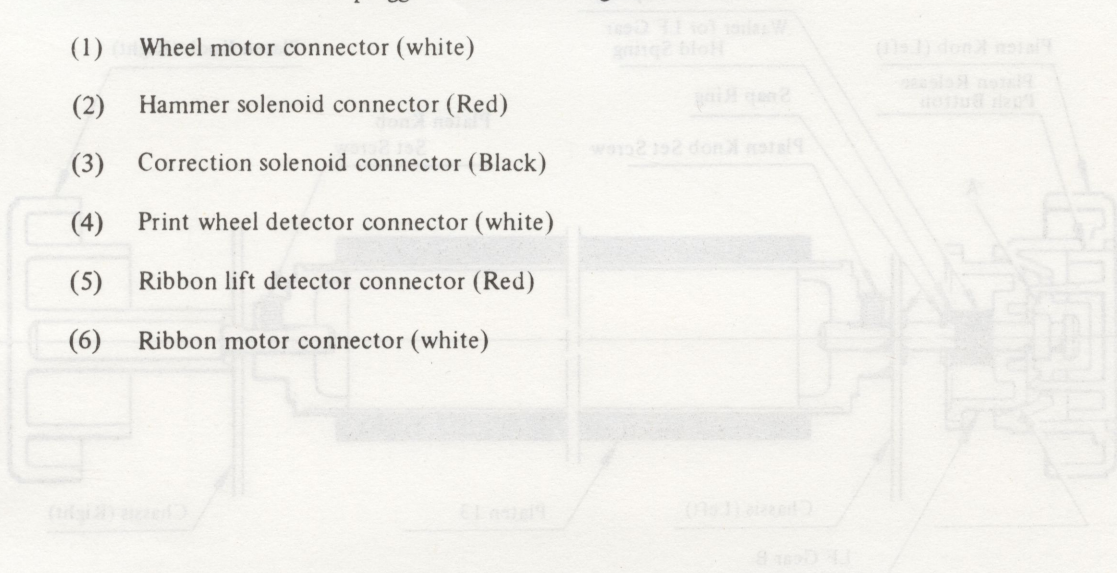
All removed parts can be installed again in the inverse steps to the removal.

However, the flat cable C should be bent at right angle so that it cannot come into contact with the chassis R and head holder when the head holder is fully moved rightward, secured by the front F cable holder.

Part ① shown in the figure should be bent with a radius of 20 mm. When unplugged connectors are plugged to the board again, identify each connector by color and number of pins.

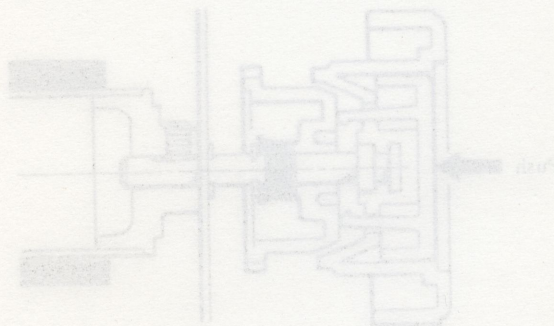
Each connector should be plugged in the following order:

- (1) Wheel motor connector (white)
- (2) Hammer solenoid connector (Red)
- (3) Correction solenoid connector (Black)
- (4) Print wheel detector connector (white)
- (5) Ribbon lift detector connector (Red)
- (6) Ribbon motor connector (white)



By the LF gear hold spring, the LF gear is engaged with the left platen knob, and rotates together with the left platen knob, thereby the rotation transmitted to the LF gear causes rotation of the platen.

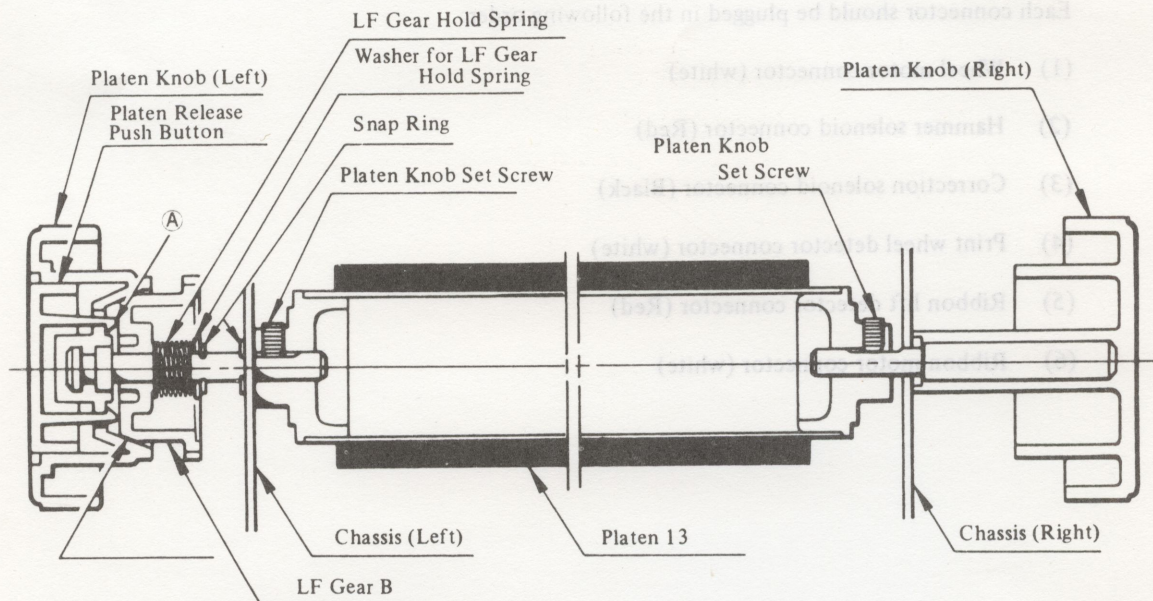
When the platen release pushbutton depressed, the LF gear is pressed by part A of the platen release pushbutton and the left platen knob is disengaged from the LF gear, thereby the platen is released, and can be freely rotated or positioned even when the LF gear is held in position.



Platen knob released

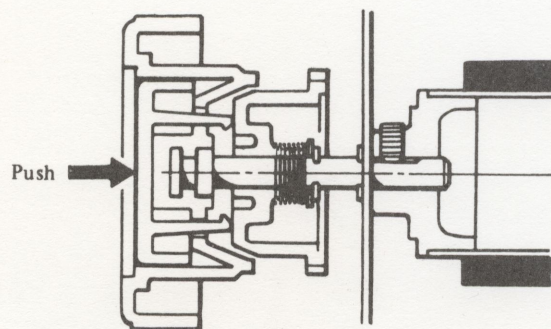
12. Platen

The platen is constructed as shown in the below figure, and driven by the LF motor through the LF gear. (For details, refer to the description about LF mechanism.)



By the LF gear hold spring, the LF gear is engaged with the left platen knob, and rotates together with the left platen knob, thereby the rotation transmitted to the LF gear causes rotation of the platen.

When the platen release pushbutton depressed, the LF gear is pressed by part A of the platen release pushbutton and the left platen knob is disengaged from the LF gear, thereby the platen is released, and can be freely rotated or positioned even when the LF gear is held in position.



Platen knob released

1) Removal and installation of platen

The platen 13 can be removed by loosening the left and right platen knob set screws, and taking out the left platen knob and right platen knobs from the platen 13.

After the removal of the platen, the paper pan 13, paper feed roller, paper pan holder plate and paper release lever can be also removed.

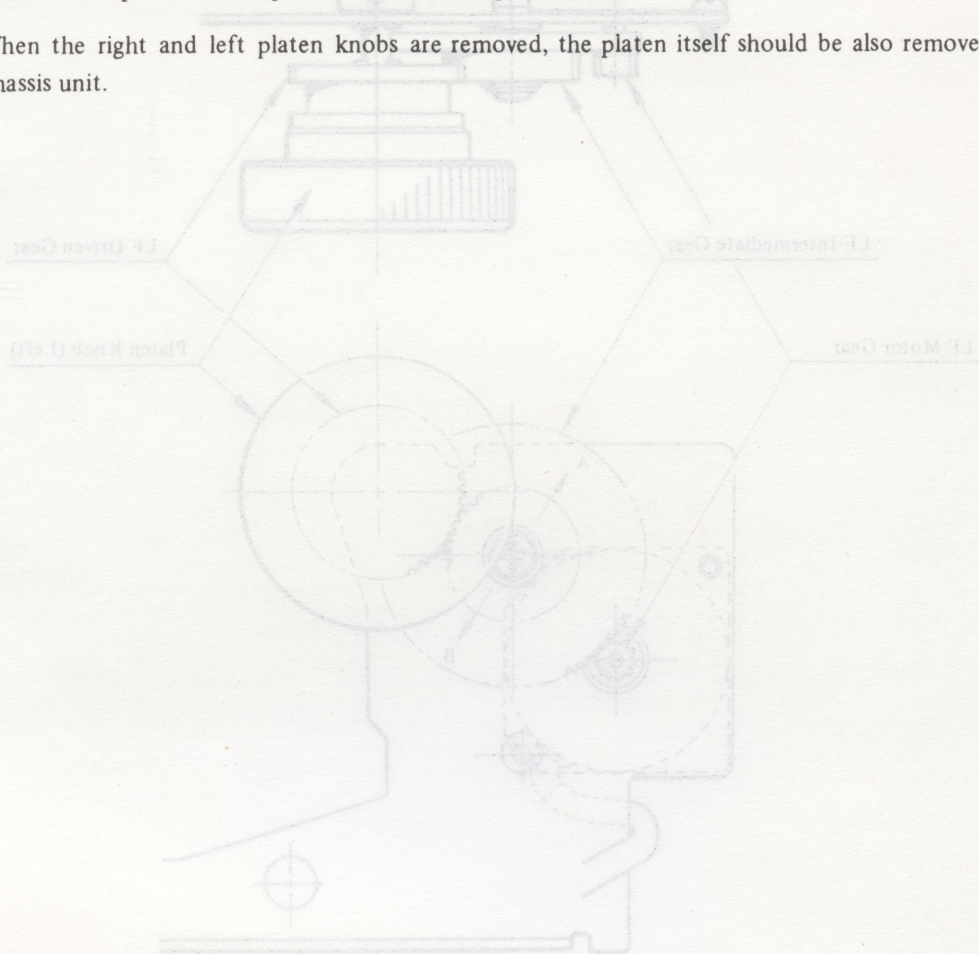
To install the platen 13 again, make sure the paper pan 13, paper feed roller and related parts are properly positioned and then place the platen 13 in position.

Under paper releasing condition, install the left and right platen knobs to the platen and, maintaining a lateral play to zero, tighten the platen knob set screws.

The platen knob set screws should be tightened at each set spot of the platen knobs.

The released platen should permit smooth and light rotation.

- * When the right and left platen knobs are removed, the platen itself should be also removed from the chassis unit.



1) Adjustment of backlash of LF intermediate gear

The minimum backlashes between the LF motor gear and the LF intermediate gear, and the LF intermediate gear and the LF driven gear should be 0.02 mm. To adjust the backlashes between the LF motor gear and LF intermediate gear, loosen the LF motor set screw and move the LF motor. To adjust the backlashes between the LF intermediate gear and LF driven gear, loosen the LF gear axle nut and move the LF intermediate gear in the direction at 45° in reference to the horizontal plane.

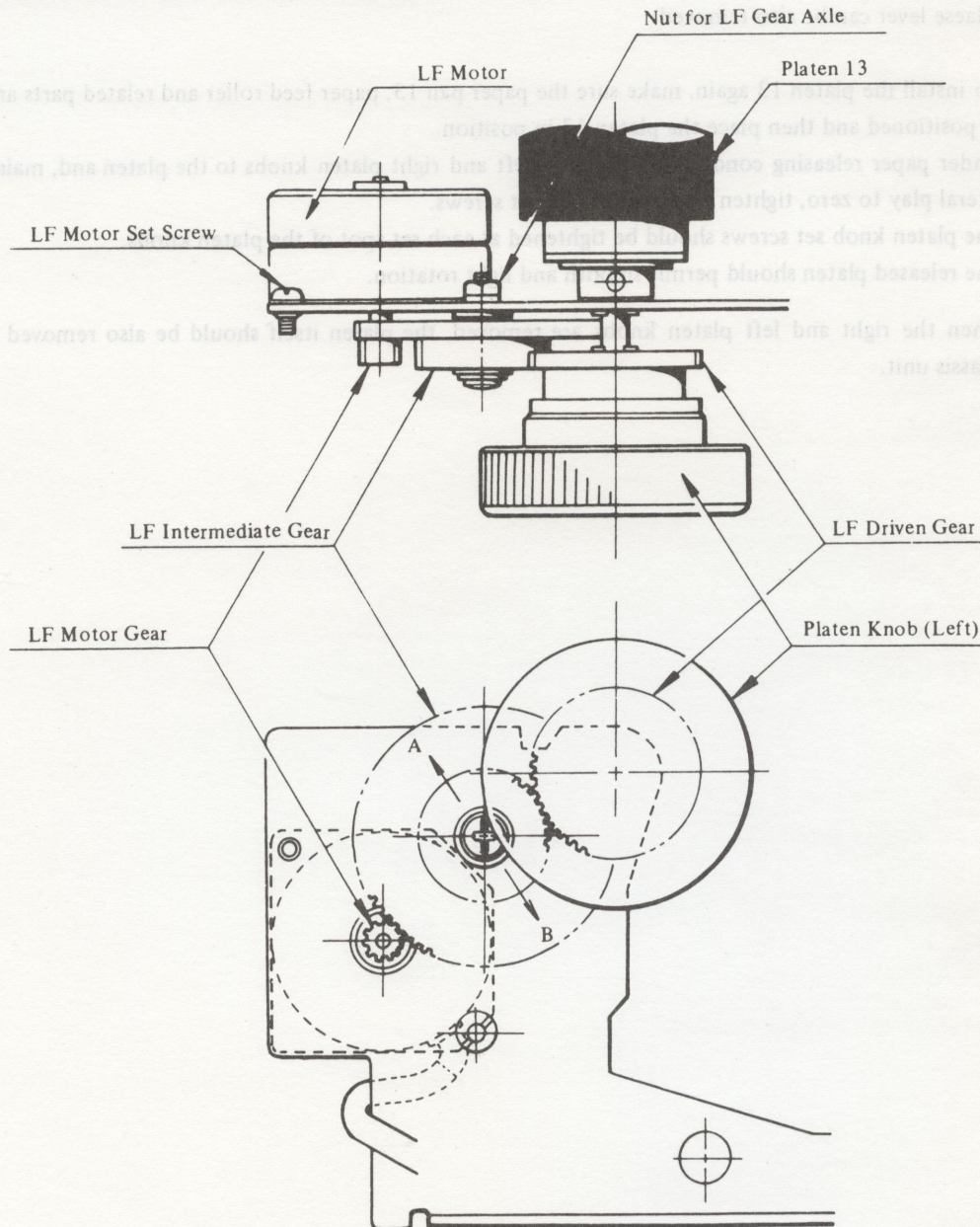
Backlash increase when the LF intermediate gear is moved in direction "A", and decrease when moved in direction "B".

If backlash is too large, the line space becomes inaccurate, printed character cannot be sized properly and large gear noise occurs.

On the contrary, too small backlash may cause large load and hunting of the LF motor.

13. LF mechanism

The driving force is given to the platen by LF motor (stepping motor) through the LF motor gear, LF gear (intermediate gear) and LF gear (driven gear).



1) Adjustment of backlash of LF intermediate gear

The minimum backlashes between the LF motor gear and the LF intermediate gear, and the LF intermediate gear and the LF driven gear should be 0.05 mm. To adjust the backlashes between the LF motor gear and LF intermediate gear, loosen the LF motor set screw and move the LF motor. To adjust the backlashes, between the LF intermediate gear and LF driven gear, loosen the LF gear axle nut and move the LF intermediate gear in the direction at 45° in reference to the horizontal plane. Backlash increase when the LF intermediate gear is moved in direction "A", and decreases when moved in direction "B".

If backlash is too large, the line space becomes inaccurate, printed character cannot be erased properly and large gearing sound occurs.

On the contrary, too small backlash may cause large load and hunting of the LF motor.

2) Adjustment of paper release lever position

When the paper release lever is not at pulled position, gap **a** between the paper release lever and the paper pan holder plate should be within a range from 0.1 mm to 0.5 mm. (See Fig.14-1)

To adjust, release the paper release lever axle nut and move the paper release lever vertically.

To check the adjustment, put one sheet of QA paper, four sheets of typing paper and four sheets of carbon paper into the gap and make sure they can be easily moved.

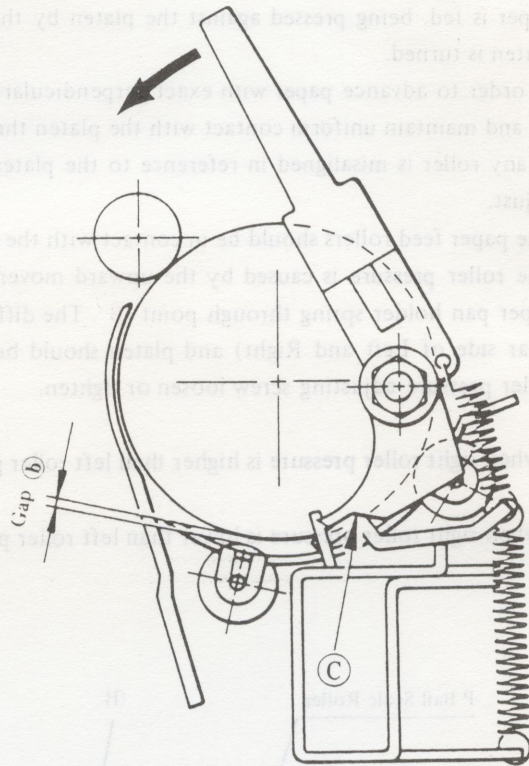


Fig. 14-2

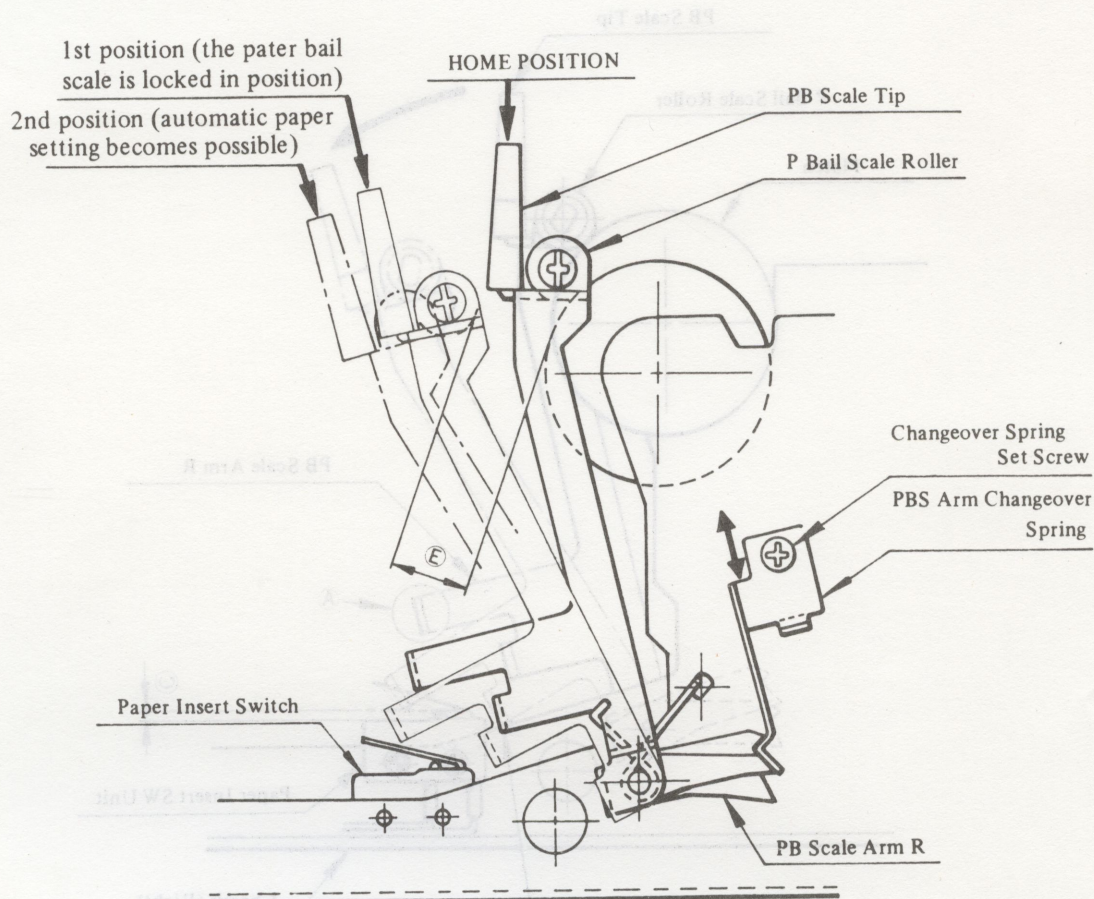
3) Paper bail scale

Like the paper feed rollers, the paper bail scale rollers should be able to smoothly rotate, and maintain uniform contact with the platen so that they securely hold a given paper in position.

Locate the left roller to the left extremity, and the right roller to the right extremity. Rotate the platen without paper. The rollers should rotate when the platen is rotated. If roller is not in uniform contact with the platen, and does not rotate, twist the left and right paper bail scale arms to adjust.

Paper is inserted with the paper bail scale rollers lifted up. When the tip of paper bail scale arm (R) is pulled, the rollers (hence, paper bail scale) leave the platen, and are locked at a certain position by the PBS arm changeover spring.

By further pulling the lever, the paper insert switch is turned on by the right paper bail scale arm and automatic paper setting (automatic paper feed) becomes possible. (The automatic paper setting will be described later in detail.)



4) Adjustment of PBS arm changeover spring

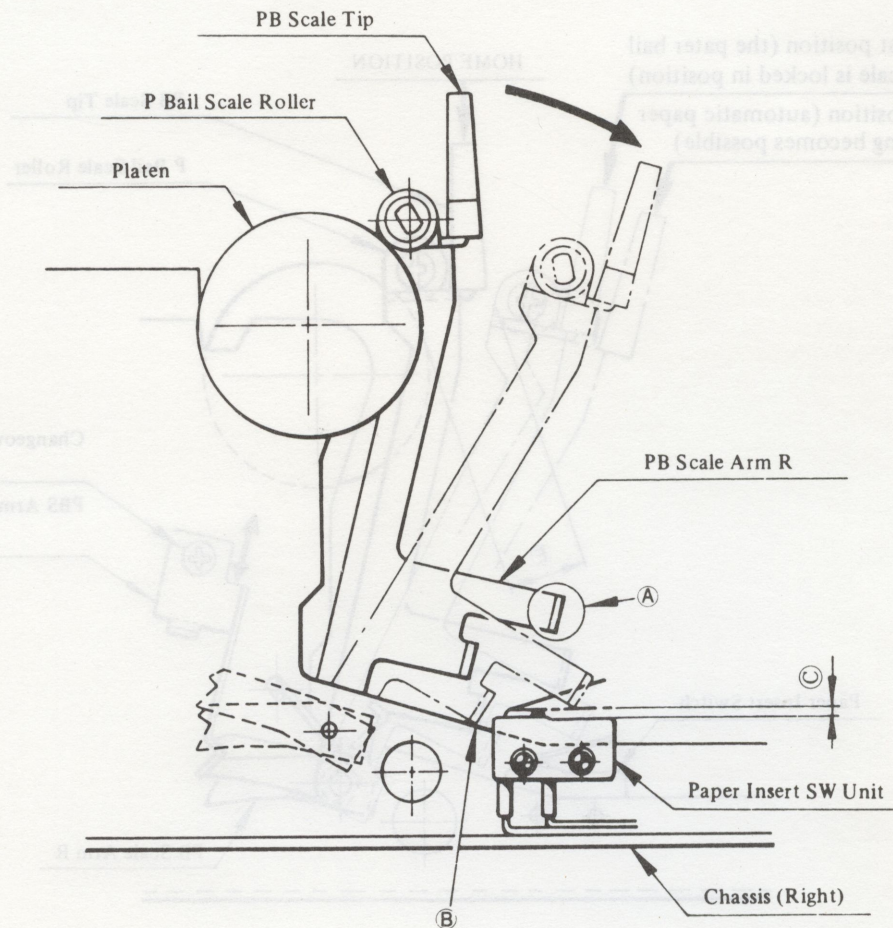
When the paper bail scale lever is set at the lock position (1st position), the right paper bail scale arm should not turn on the paper insert switch.

The right paper bail scale arm can be adjusted for its lock position by moving the PBS arm changeover spring in vertical direction so that paper can smoothly pass through between the platen and the paper bail scale rollers when the platen knob is turned by hand with the paper bail lever set at the lock position.

It is recommended that gap ⑤ between the platen and the paper bail scale rollers is 13 mm when the right paper scale arm is locked.

15. Automatic paper setting

By fully pulling the tip of paper bail scale arm (R), a given paper can be automatically fed and positioned. When the tip of paper bail scale arm (R) is pulled to the 2nd position, the right paper bail scale arm depresses the paper insert switch and the LF motor is turned on.



1) Adjustment of paper insert switch

When the tip of paper bail scale arm (R) is fully pulled (until the right paper bail scale arm comes into contact with the right chassis), paper should be automatically fed.

To adjust, bend part (A) of right paper bail scale arm so that gap (C) (between the stainless steel lever and the switch body) exists even when gap (B) is reduced to zero after the paper insert switch is turned on with gap (B) larger than 0.2 mm.

(For details, refer to the description about the paper bail scale.)

16. Cover switch

When the top cover is opened for replacement of ribbon cassette or daisy wheel, two CPUs used in driver circuits are reset.

For this interlock, cover switch (microswitch) is used, and sends a ON/OFF signal to the control circuit so that the drive motors are turned off.

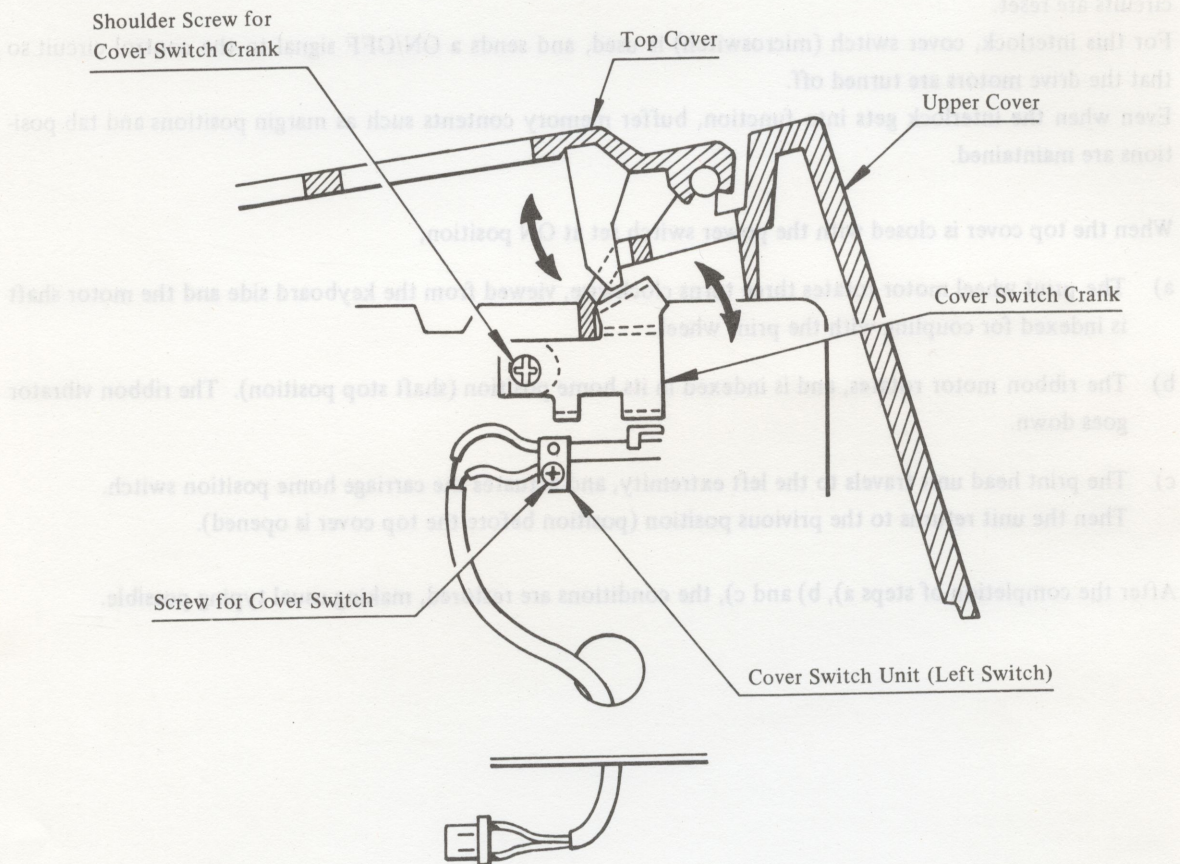
Even when the interlock gets into function, buffer memory contents such as margin positions and tab positions are maintained.

When the top cover is closed with the power switch set at ON position,

- a) The print wheel motor rotates three turns clockwise, viewed from the keyboard side and the motor shaft is indexed for coupling with the print wheel.
- b) The ribbon motor rotates, and is indexed in its home position (shaft stop position). The ribbon vibrator goes down.
- c) The print head unit travels to the left extremity, and actuates the carriage home position switch. Then the unit returns to the previous position (position before the top cover is opened).

After the completion of steps a), b) and c), the conditions are restored, making usual typing possible.

1) Adjustment of cover switch



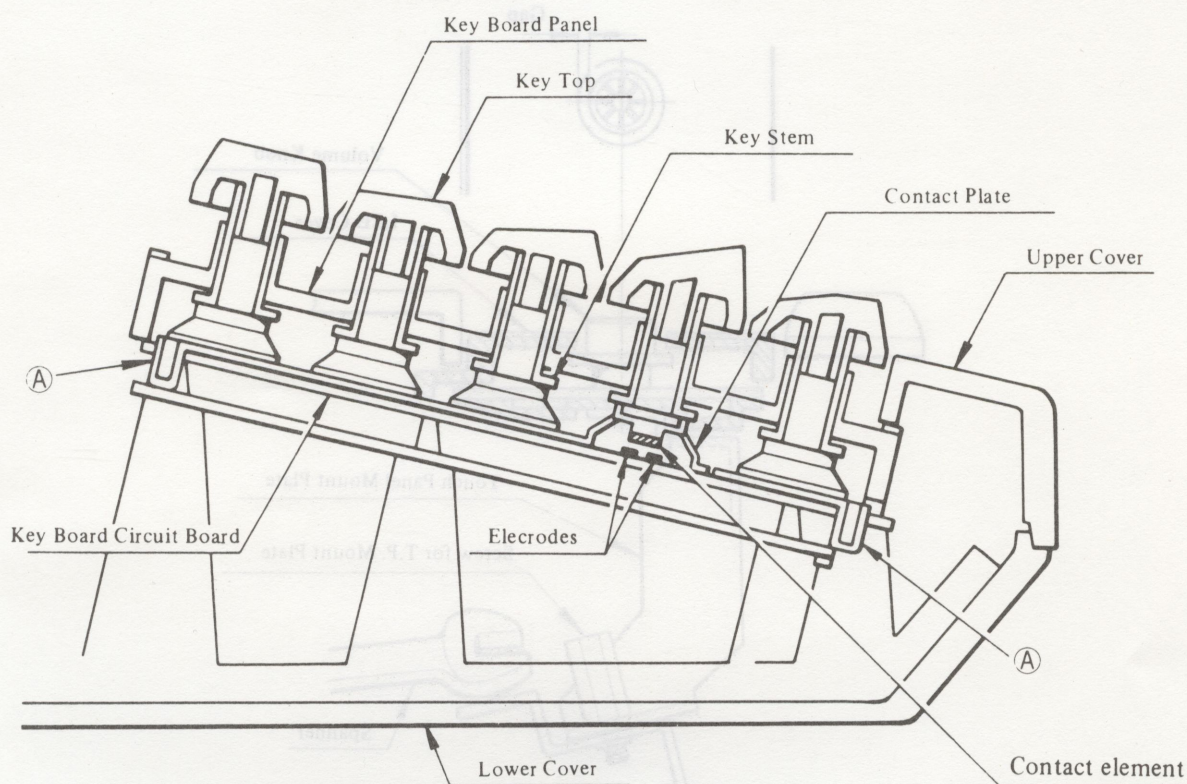
The cover switch should be turned on and off when the top cover is opened and closed.

The cover switch unit should be positioned so that the typing becomes possible when the top cover is closed to 18 mm – 35 mm forward from the position at which the interlock works.

The cover switch position adjustment can be made by loosening the cover switch screw and moving the cover switch.

17. Keyboard

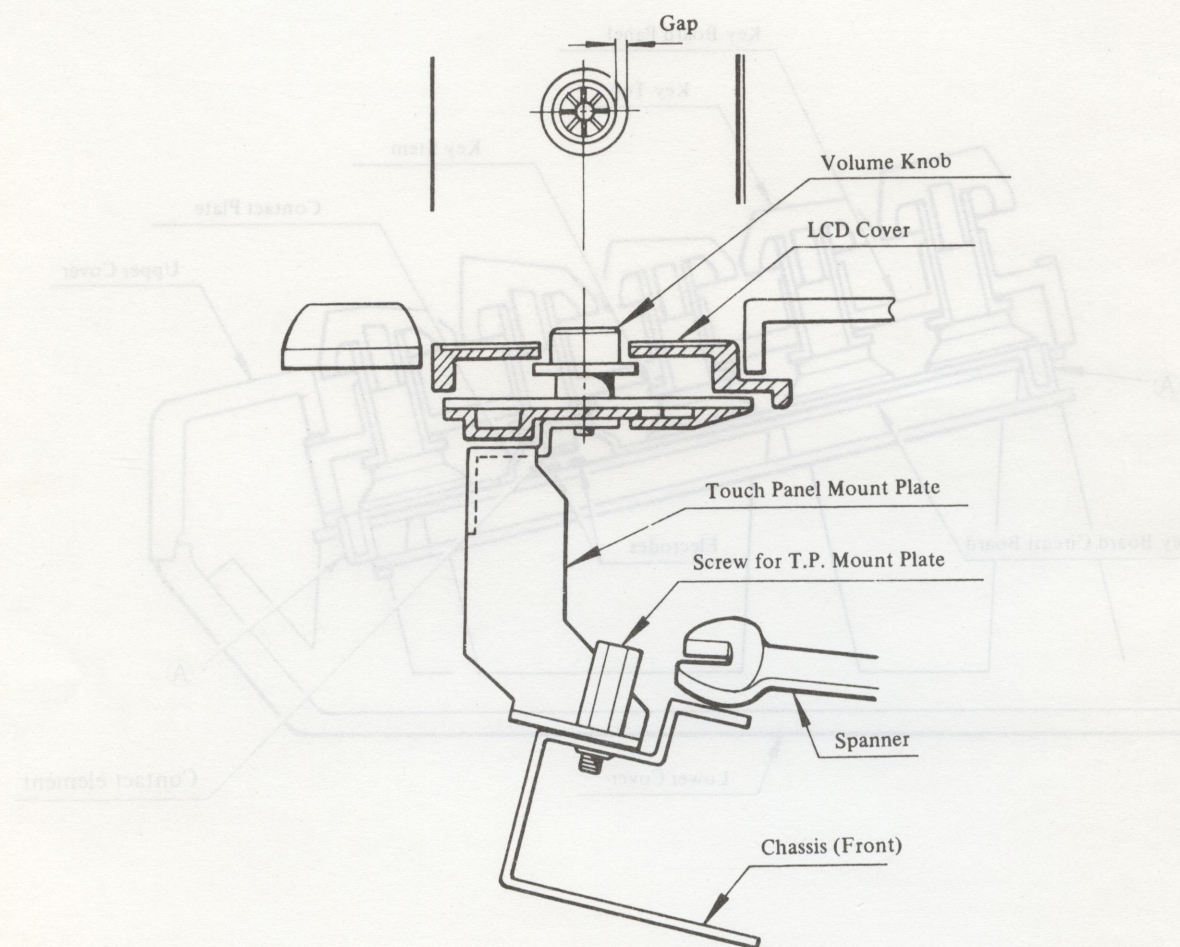
The keyboard consists of key tops, keystems, keyboard panel, contact plate and keyboard circuit board. When key top is depressed, the key stem is pressed down and the contact element comes into contact with the electrodes, thus producing key-in signal.



- 1) To replace key stem, remove the top cover, remove the key board panel assembly and then take out the key top.
Whenever key stem is replaced, make sure it can move by gravity.
- 2) To replace contact plate, remove the top cover and keyboard panel unit.
Care should be taken in replacement of key plate not to allow any foreign matter to fall on, or adhere to the keyboard circuit board.
If the keyboard circuit board is found foul, wipe it out using alcohol.
The contact plate should be securely installed with part ① put into the holes made in the keyboard circuit board.

18. Adjustment of mounted position of LCD volume knob and touch panel with respect to LCD cover

When, after mounting on the cover, the volume knob and the center of the touch panel are not aligned with respect to the hole in the LCD cover and the center of the square hole, loosen the screw for the touch panel mount plate and center these items.



LUBRICATION STANDARD

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LUBRICATION STANDARD

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LUBRICATION STANDARD

I. Lubrication grease and oil

B : Grease B

E : Epinoc grease # 1

S : Silicon grease KS64F

SO : Silicon oil KF96

U : Uniway oil

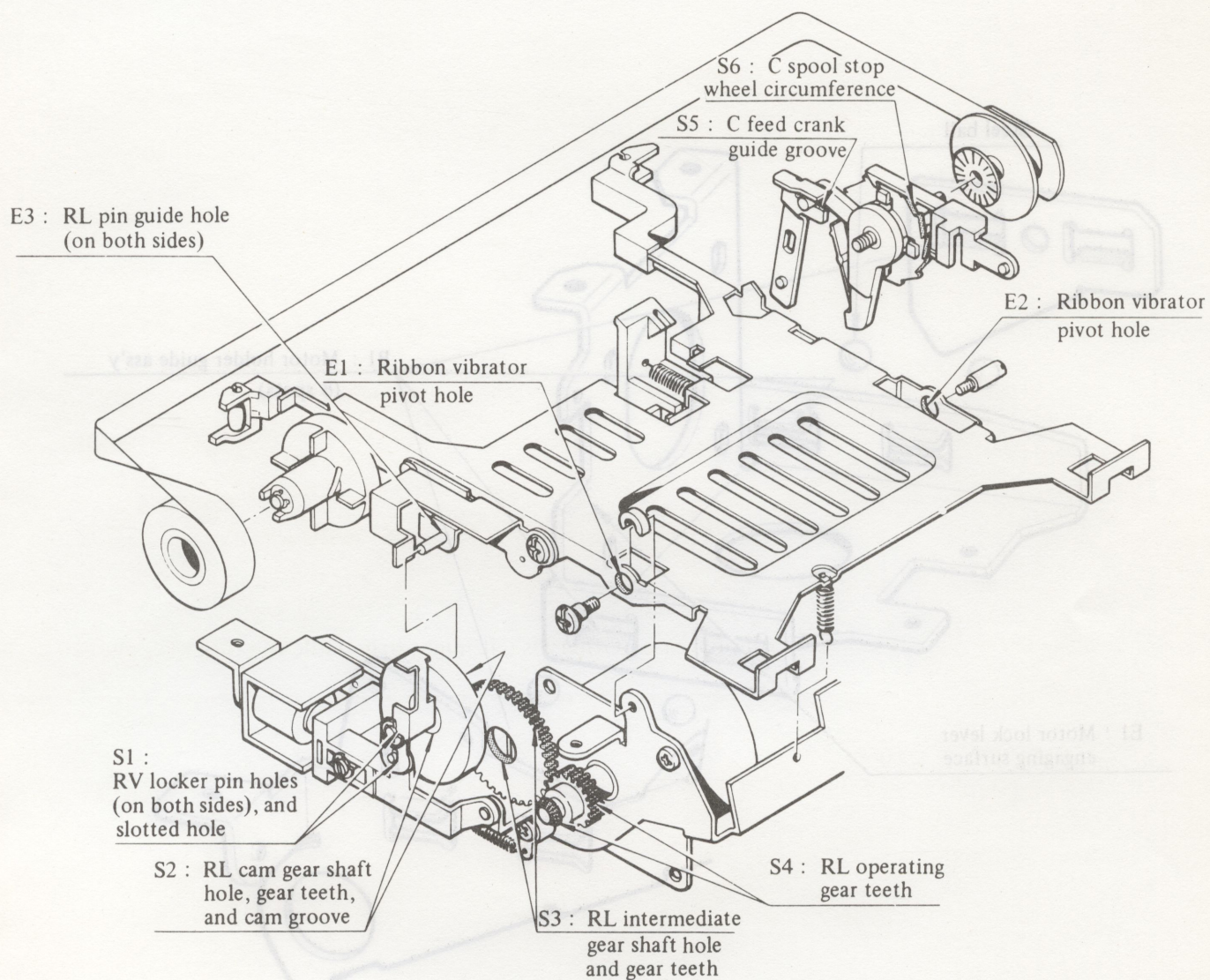
II. CAUTIONS

- 1) Carefully lubricate the mechanisms to avoid smearing resin parts, P.C. boards or any other electronic part with oil or grease.

Do not apply excessive oil or grease. Otherwise, it might drip while the typewriter is in use, or out of use.

- 2) Carefully apply oil or grease to the frictional or abrasive surfaces of mechanical parts.

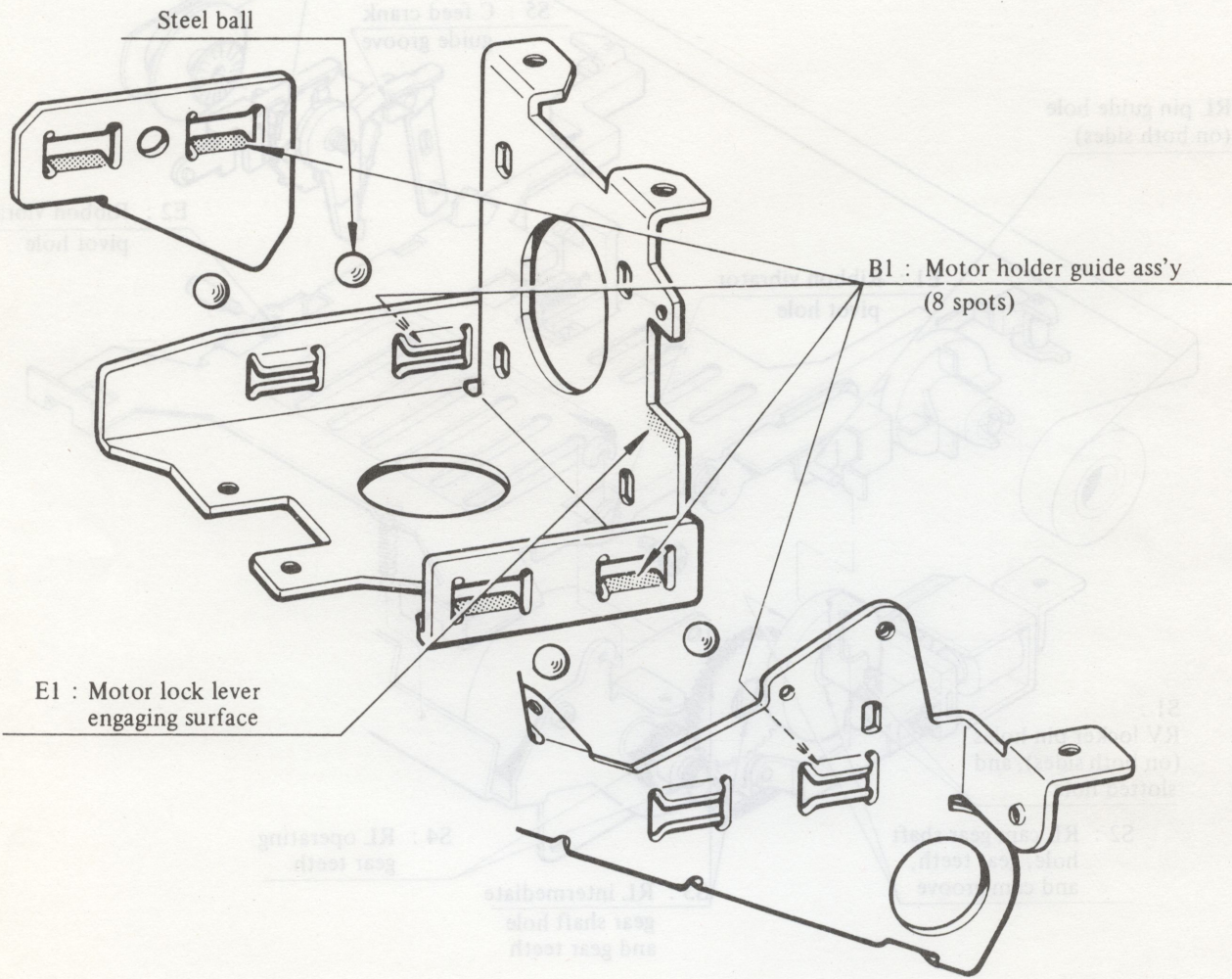
1. HEAD ASSEMBLY (1)



S1 ~ S6 : Silicon grease KS64F

E1 ~ E3 : Epinoc grease #1

2. HEAD ASSEMBLY (2)

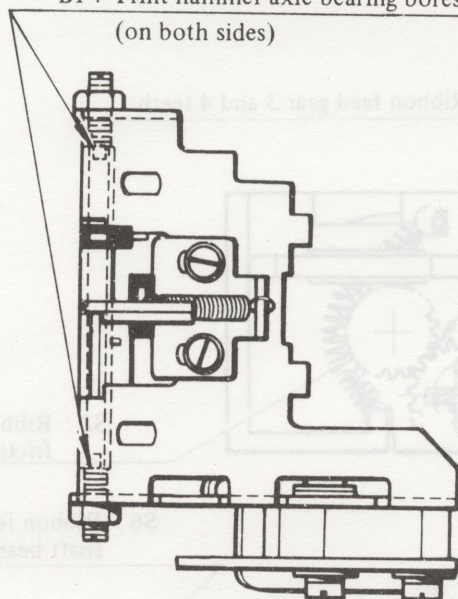


B1 : Grease B

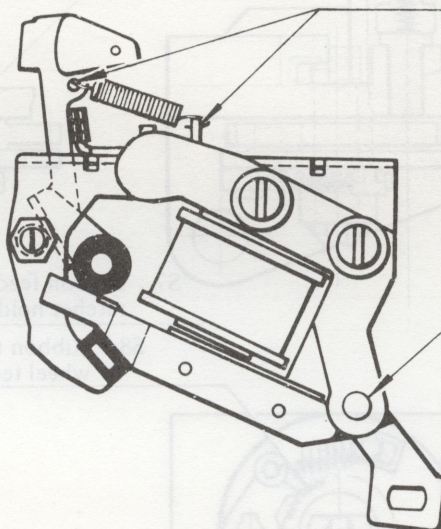
E1 : Epinoc grease #1

3. PRINT HAMMER UNIT

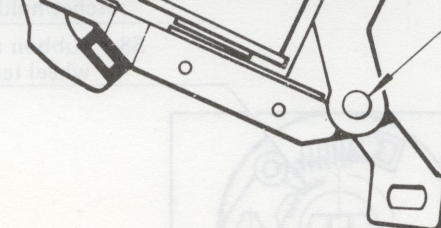
B1 : Print hammer axle bearing bores
(on both sides)



B3 : Spring hooking
portions



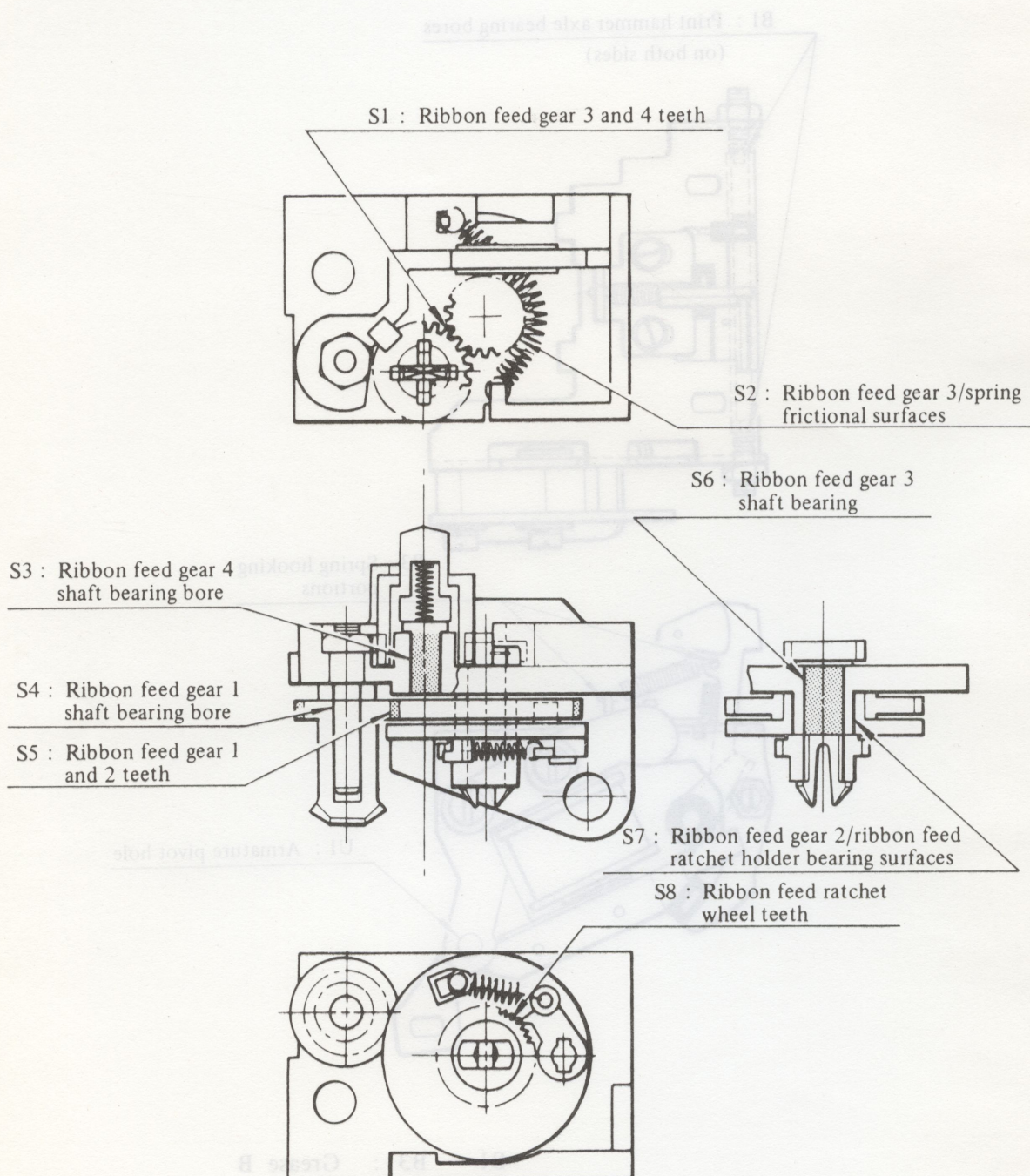
U1 : Armature pivot hole



B1 ~ B3 : Grease B

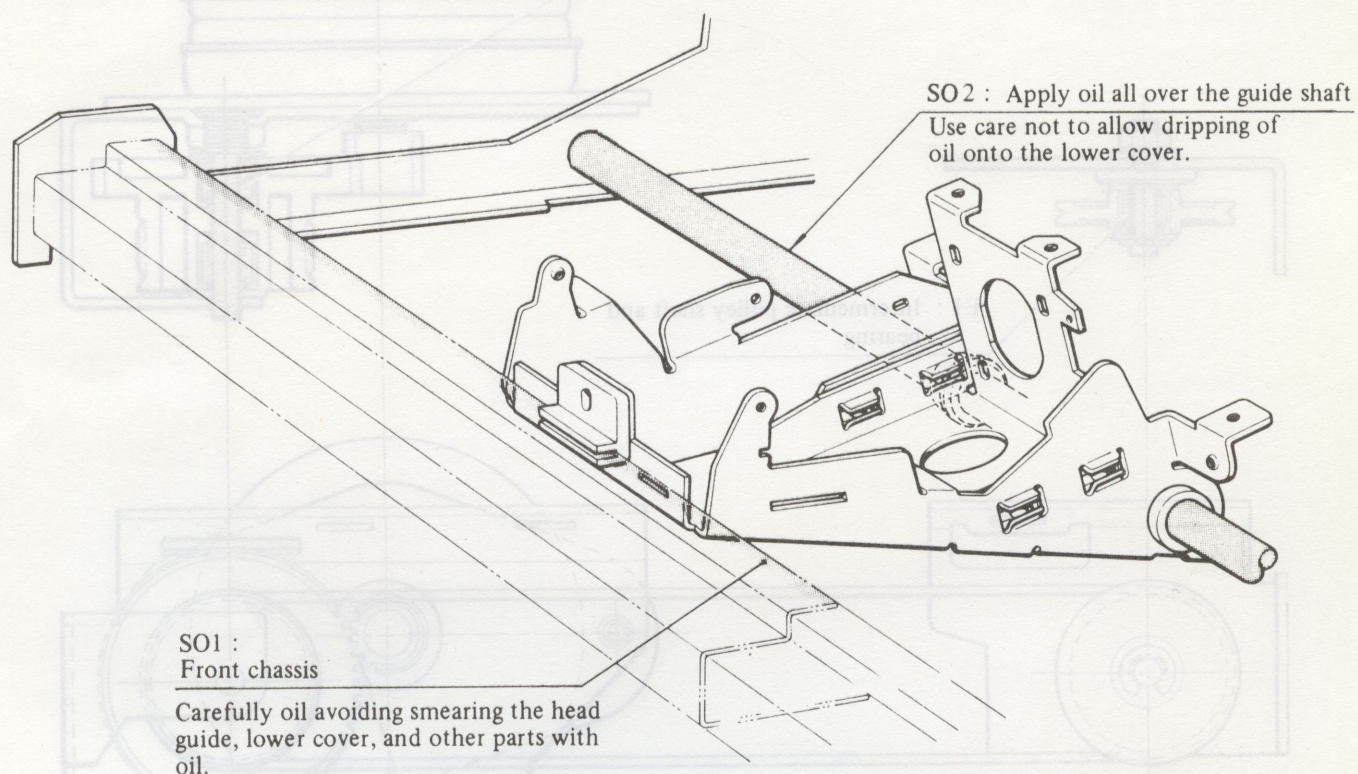
U1 : Uniway oil

4. RIBBON FEED GEAR BASE UNIT



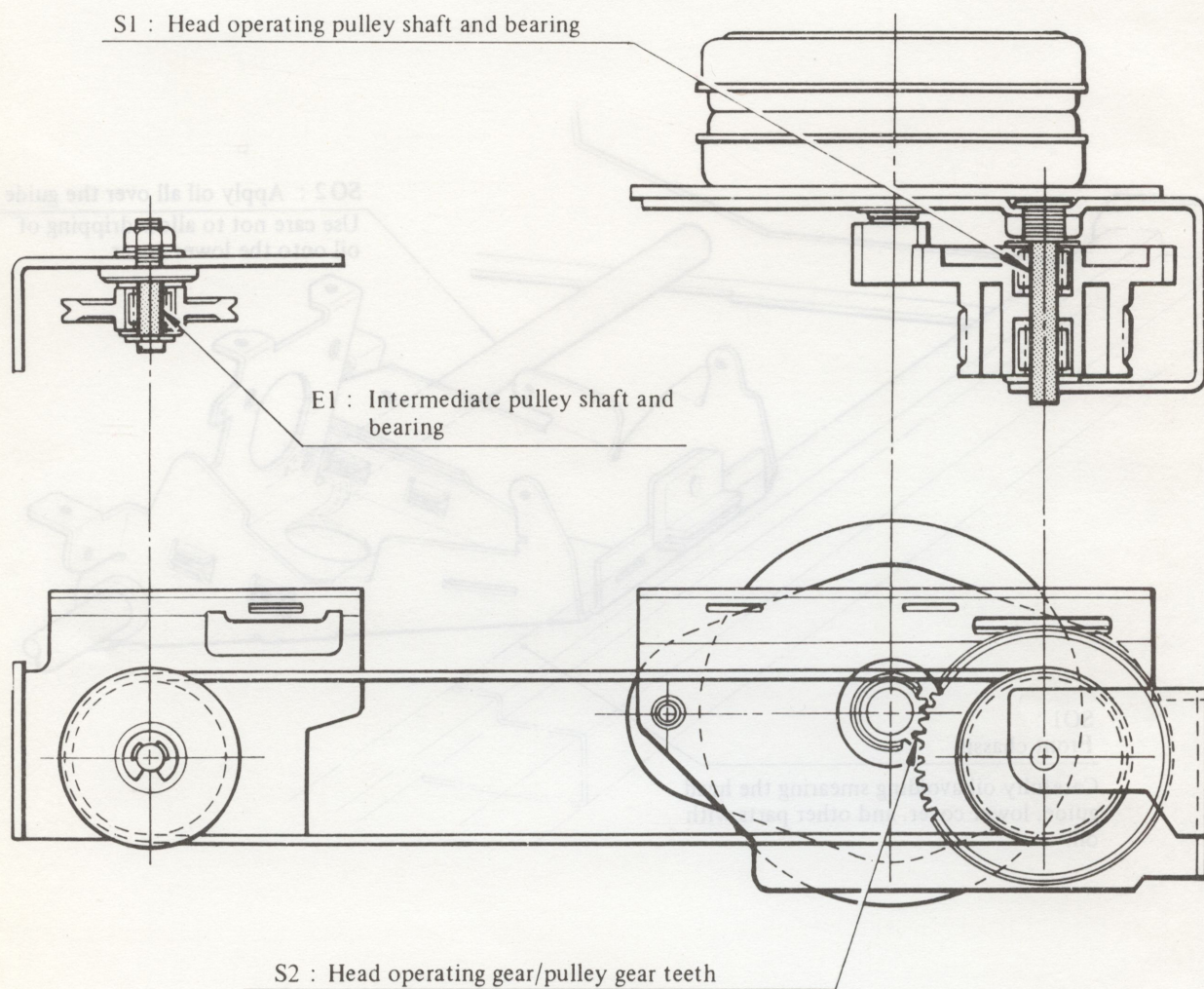
S1 ~ S8 : Silicon grease KS64F

5. HEAD OPERATING MECHANISM (1)



SO1~ SO2 : Silicon oil KF96

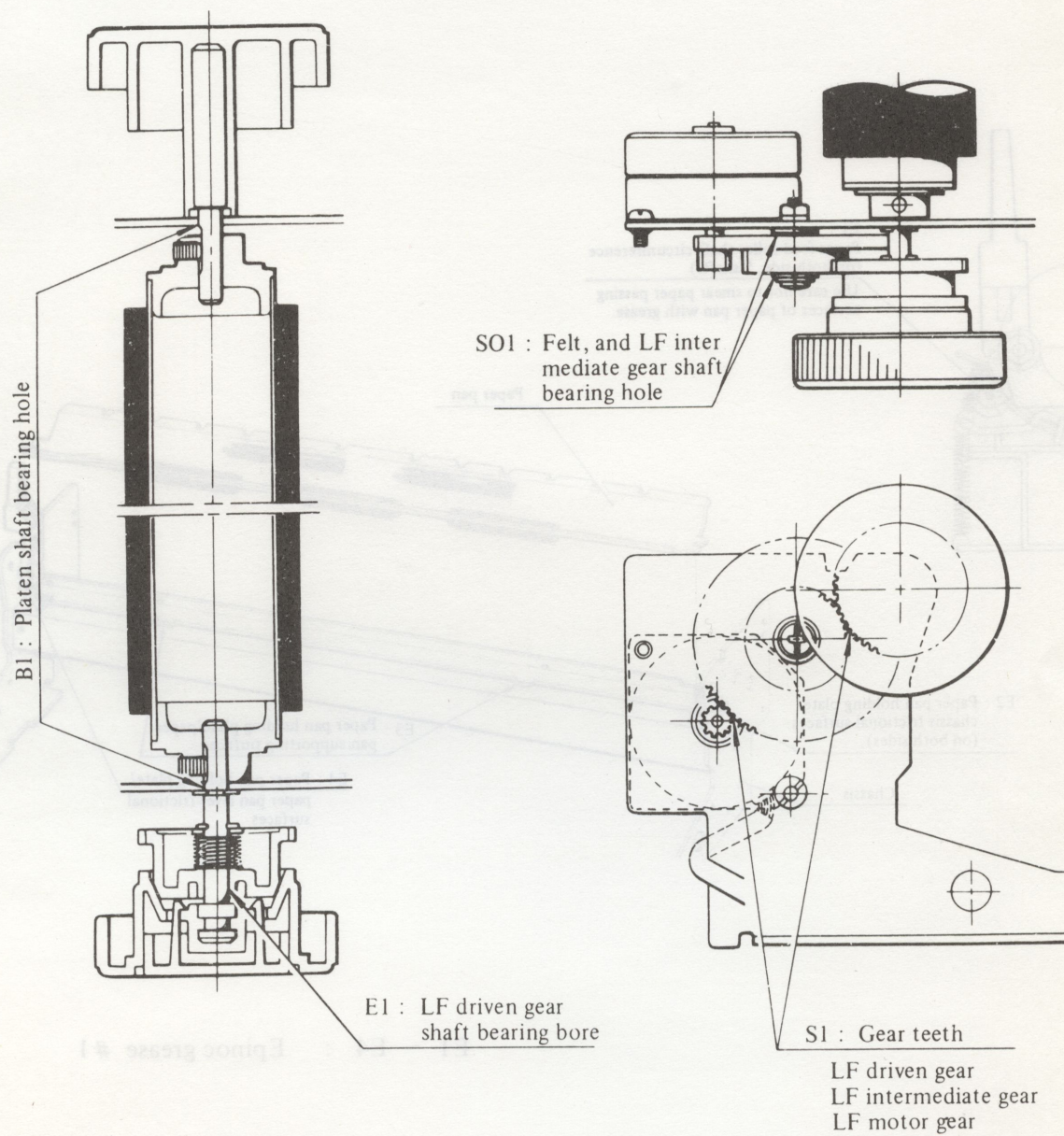
6. HEAD OPERATING MECHANISM (2)



S1 , S2 : Silicon grease KS64F

E1 : Epinoc grease #1

7. PLATEN MECHANISM (1)



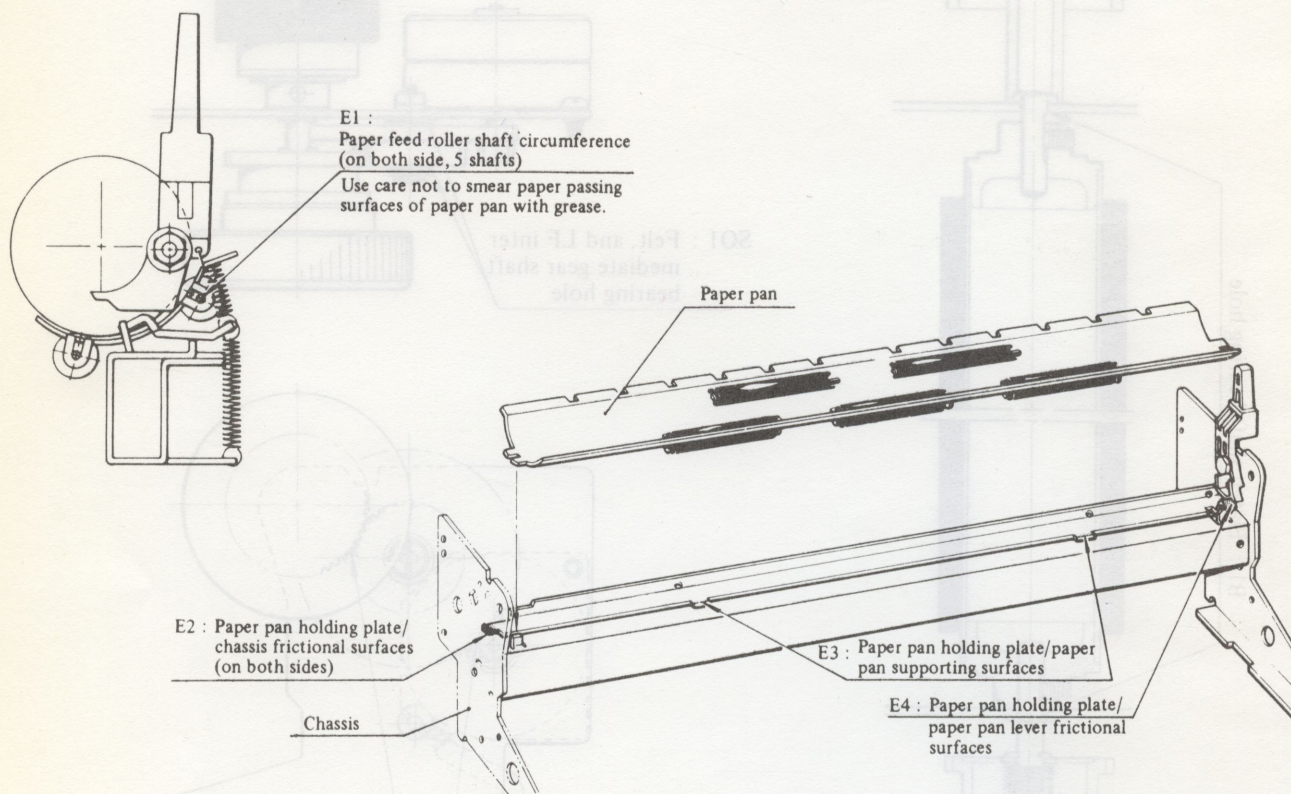
S1 : Silicon grease KS64F

B1 : Grease B

SO1 : Silicon oil KF96

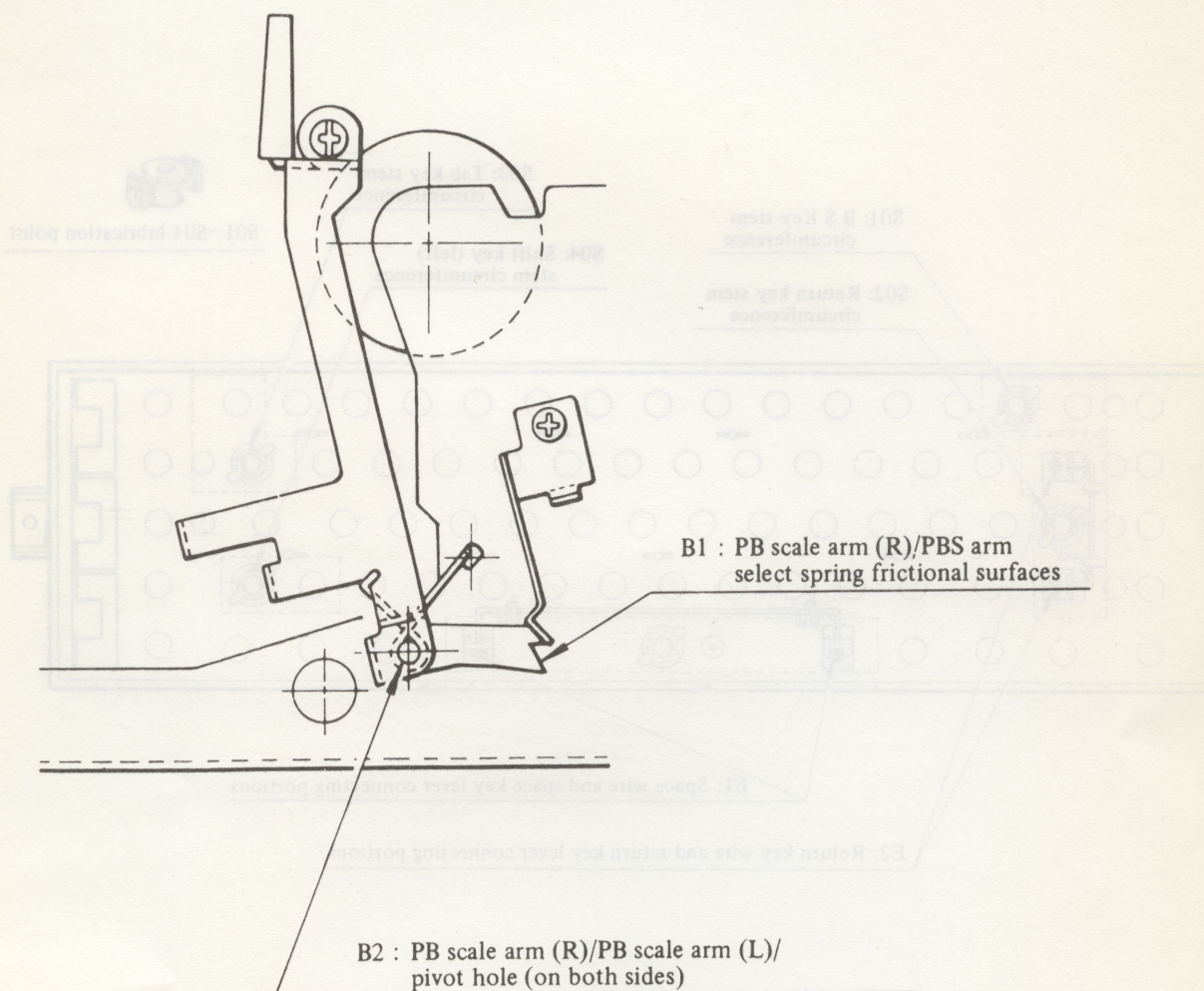
E1 : Epinoc grease #1

8. PLATEN MECHANISM (2)



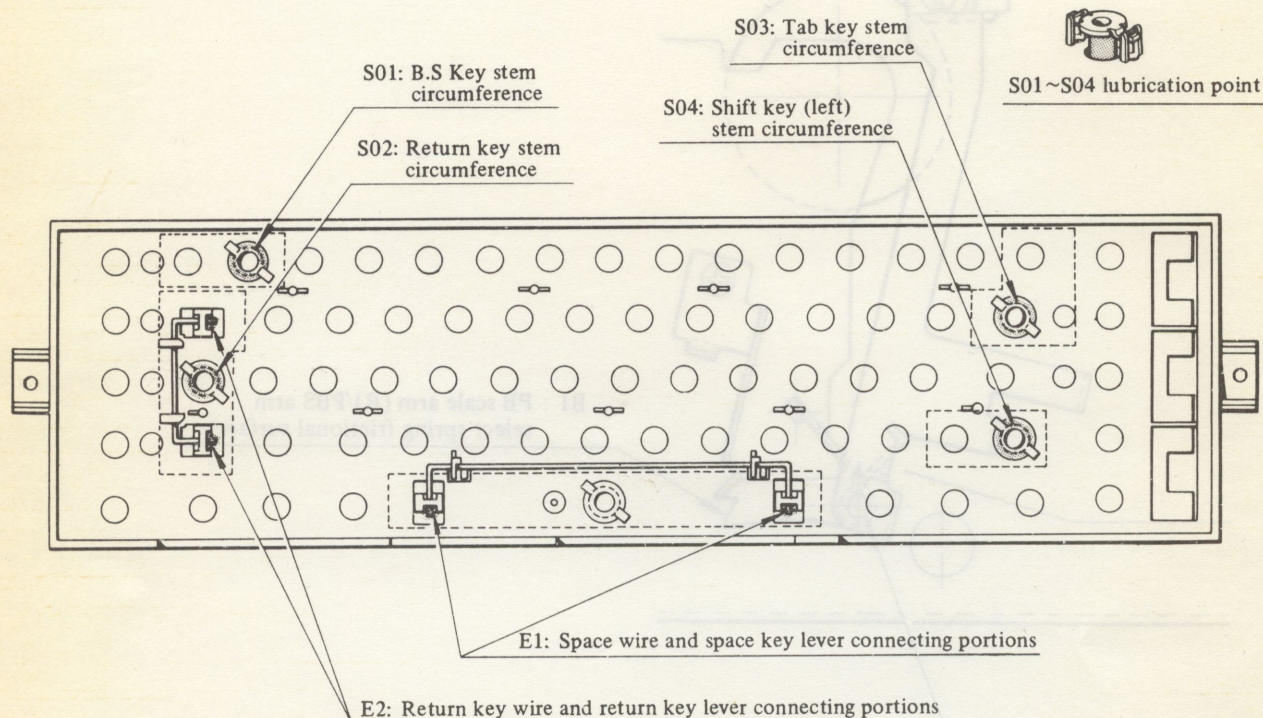
E1 ~ E4 : Epinoc grease #1

9. PLATEN MECHANISM (3)



B1 , B2 : Grease B

10. KEYBOARD MECHANISM



S01 ~ S04 : Silicon Oil KF96

E1 ~ E2 : Epinoc grease # 1

